

NASD Market Surveillance Assessment and Recommendations

Final Report

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This report was prepared by Steven Polansky, Michael Kulczak, and Larry Fitzpatrick of the National Association of Securities Dealers (NASD), in collaboration with Chemonics International Inc., prime contractor to the U.S. Agency for International Development for the AMIR Program in Jordan

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Author: Steven Polansky, Michael Kulczak, Larry Fitzpatrick

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- Pump and dump fraud
- Front-running research
- Insider trade reporting
- Front-running client orders
- Trading away
- Wash sales/pre-arranged trading (wash sales)
- Marking the open/close (marking)
- Spoofing

Abstract

NASD was contracted by the AMIR Program “to provide recommendations aimed at enhancing market surveillance of the Jordanian Capital Markets, particularly the market surveillance capabilities of the ASE.” For purposes of this project, “market surveillance” is defined to encompass the processes and technologies that support the detection and investigation of potential trading rule violations.

NASD’s recommendations are divided into five broad categories

- Recommendations relating to the allocation of market surveillance responsibilities between the Jordan Securities Commission (JSC), Amman Stock Exchange (ASE), and Securities Depository Center (SDC);
- Recommendations relating to policies and processes to improve both the surveillance of the market as well as to support development of a culture of compliance among member firms, particularly as it relates to market surveillance;
- Recommendations relating to modifications to the ASE By-Law;
- Recommendations relating to technology to support improved use of automated surveillance detection and analysis tools; and
- Recommendations relating to next steps.

Table of Contents

Executive Summary.....	1
I. Background	4
II. Project Objectives.....	4
III. Definition of “Market Surveillance”.....	4
IV. Allocation of market surveillance responsibilities.....	5
Recommendation 1: JSC should retain ultimate jurisdiction in market surveillance.....	10
Recommendation 2: JSC and ASE should consider allocating market surveillance responsibilities.....	11
Recommendation 3: The allocation of market surveillance responsibilities between the JSC, ASE, and SDC should be memorialized in an appropriate document.....	16
V. Policy and Process Recommendations	18
Recommendation 4: Develop process manuals for market surveillance Activities.....	18
Recommendation 5: Reform process for releasing material news to the public.....	19
Recommendation 6: Require broker-dealers to transmit notification to the JSC and ASE regarding release of research reports.....	21
Recommendation 7: Designate chief compliance officer at each broker dealer.....	21
Recommendation 8: Require listed firms to respond promptly to regulatory inquiries through designation of chief compliance officer at each listed company.....	23
Recommendation 9: Develop sanction guidelines for trading and other violations.....	25
Recommendation 10: Prohibit joint customer-broker accounts.....	26

Recommendation 11: Require broker-dealers to submit their employees NINs to the JSC and ASE.....	26
Recommendation 12: Establish JSC oversight program over ASE and SDC through the adoption of formal review procedures	27
Recommendation 13: The JSC and ASE should rapidly publicize enforcement actions against firms and individuals.....	29
VI. Changes to ASE By-Law	30
Recommendation 14: Modify By-Laws to support previous recommendations related to member firms.	30
Recommendation 15: Modify By-Laws to enhance the exchange's authority vis-à-vis listed companies	31
Recommendation 16: Provide the Exchange management with authority to sanction a listed company for failure to comply with the legitimate exercise of authority conferred in the By-Laws or elsewhere.....	31
VII. Market Surveillance Technology	31
Recommendation 17: Extend MIS as the batch detection engine for the Exchange.....	33
Recommendation 18: Develop basic real-time alerting capability for the Exchange.....	35
Recommendation 19: Establish batch surveillance capability at the Commission.....	36
Recommendation 20: Build systems to collect and database non-market data.....	37
Recommendation 21: Capture, store, and catalog material news.....	39
Recommendation 22: Provide secure batch data transfer capabilities.....	41
Recommendation 23: Complete plans to implement extranet at Exchange and Commission.....	43
Recommendation 24: Resolve exchange of sensitive data needed for surveillance.....	43

Recommendation 25:	
Establish knowledge engineering team(s).....	44
VIII. Next Steps.....	48
Recommendation 26.....	48
Appendices.....	50
Appendix 1 – Sample Elements of Process Manual.....	51
Appendix 2 – Description of Potentially “Material” Events.....	56
Appendix 3 – SGX Listed Company Contact Requirements.....	57
Appendix 4 – Contact Report.....	58
Appendix 5 – Excerpted NASD Sanction Guidelines.....	59
Appendix 6 – SEC Enforcement Action Press Release.....	68
Appendix 7 – NASD Enforcement Action Press Release.....	70
Appendix 8 – Knowledge Engineer Job Description.....	73
Appendix 9 – List of Individuals with Whom NASD Team Met.....	74

EXECUTIVE SUMMARY

Background

The Jordanian capital market plays a key role in the development of the country as a whole. Significant accomplishments have been achieved over the past years, including the drafting of a new Securities Law, the development and implementation of a modern automated depository, the computerization of market information dissemination displaying real-time information, and the execution of a series of training and investor education programs.

Jordan has taken significant steps in developing a self-sustaining capital market that attracts domestic and international investors. Continued development and expansion of this market is essential to broadening and deepening investment and financing opportunities in the country. Critical to the success of this effort is ensuring investor confidence. The Jordan Securities Commission (JSC) plays a central role in promoting such confidence, by protecting investors and promoting market integrity. To these ends, the Commission is developing equity market regulations, corporate governance standards, and investor education and public awareness programs. The Commission has also embarked on a program to improve surveillance of the market. This program includes strengthening the JSC rules, and the ASE internal by-laws, that deal with market surveillance, enhancing the ASE's market surveillance procedures and systems and identifying the roles and responsibilities of the JSC, ASE and SDC in market surveillance.

Overview

NASD was contracted by the AMIR Program to assist in the development of an effective market surveillance program and specifically "to provide recommendations aimed at enhancing market surveillance of the Jordanian Capital Markets, particularly the market surveillance capabilities of the ASE." For purposes of this project, "market surveillance" is defined to encompass the processes and technologies that support the detection and investigation of potential trading rule violations.

NASD's recommendations are divided into five broad categories

- Recommendations relating to the allocation of market surveillance responsibilities between the Jordan Securities Commission (JSC), Amman Stock Exchange (ASE), and Securities Depository Center (SDC) (3 recommendations);
- Recommendations relating to policies and processes to improve both the surveillance of the market as well as to support development of a culture of compliance among member firms, particularly as it relates to market surveillance (10 recommendations);
- Recommendations relating to modifications to the ASE By-Law (3 recommendations);
- Recommendations relating to technology to support improved use of automated surveillance detection and analysis tools (9 recommendations); and
- Recommendations relating to next steps (1 recommendation with multiple steps).

Recommendations

These recommendations are summarized below.

Allocation of market surveillance responsibilities

- 1) JSC should retain ultimate jurisdiction in market surveillance
- 2) JSC and ASE should consider allocating market surveillance responsibilities as follows:
 - the JSC would perform detection, investigation, and enforcement for price manipulation, insider trading, pump and dump fraud, front-running research, and insider trade reporting;
 - the ASE would perform detection and initial investigation for wash sales/pre-arranged trading (wash sales), marking the open/close (marking), and spoofing. After its initial investigation, the ASE would refer cases to the JSC. The JSC would then decide whether it and/or the ASE should handle the case further; and
 - the ASE would perform detection, investigation, and enforcement for front-running client orders and trading away.
 - The SDC would continue to monitor compliance with its own rules, but may be requested to supply information and data to support front-line surveillance and investigation performed by the JSC or ASE.
- 3) The allocation of market surveillance responsibilities between the JSC, ASE, and SDC should be memorialized in an appropriate document.

Policy and Process Recommendations

- 4) Develop process manuals for market surveillance activities
- 5) Reform process for releasing material news to the public
- 6) Require broker-dealers to transmit notification to the JSC and ASE regarding release of research reports
- 7) Designate chief compliance officer at each broker-dealer
- 8) Require listed firms to respond promptly to regulatory inquiries through designation of chief compliance officer at each listed company
- 9) Develop sanction guidelines for trading and other violations
- 10) Prohibit joint customer-broker accounts
- 11) Require broker-dealers to submit their employees NINs to the JSC and ASE

- 12) Establish JSC oversight program over ASE and SDC through the adoption of formal review procedures
- 13) The JSC and ASE should rapidly publicize enforcement actions against firms and individuals

Changes to ASE By-Law

- 14) Modify By-Laws to support previous recommendations related to member firms
- 15) Modify By-Laws to enhance the exchange's authority vis-à-vis listed companies
- 16) Provide the Exchange management with authority to sanction a listed company for failure to comply with the legitimate exercise of authority conferred in the By-Law or elsewhere

Market Surveillance Technology

- 17) Extend MIS as the batch detection engine for the Exchange
- 18) Develop basic real-time alerting capability for the Exchange
- 19) Establish batch surveillance capability at the Commission
- 20) Build systems to collect and database non-market data
- 21) Capture, store, and catalog material news
- 22) Provide secure batch data transfer capabilities
- 23) Complete plans to implement extranet at Exchange and Commission
- 24) Resolve exchange of sensitive data needed for surveillance
- 25) Establish knowledge engineering team(s)

Next steps

- 26) Next steps
 - Develop agreement between JSC and ASE on allocation of market surveillance responsibilities and memorialize agreement in Memorandum of Understanding
 - Develop agreement between JSC and ASE on priority of surveillance model development effort
 - Develop technology "road map" for the JSC and ASE
 - Begin requirements development based on priorities identified
 - Make software "build versus buy" decisions based upon budget, requirements, and capabilities

I. BACKGROUND

The Jordanian capital market plays a key role in the development of the country as a whole. Significant accomplishments have been achieved over the past years, including the drafting of a new Securities Law, the development and implementation of a modern automated depository, the computerization of market information dissemination displaying real-time information, and the execution of a series of training and investor education programs.

Jordan has taken significant steps in developing a self-sustaining capital market that attracts domestic and international investors. Continued development and expansion of this market is essential to broadening and deepening investment and financing opportunities in the country. Critical to the success of this effort is ensuring investor confidence. The Jordan Securities Commission (JSC) plays a central role in promoting such confidence, by protecting investors and promoting market integrity. To these ends, the Commission is developing equity market regulations, corporate governance standards, and investor education and public awareness programs. The Commission has also embarked on a program to improve surveillance of the market. This program includes strengthening the JSC rules, and the ASE internal by-laws, that deal with market surveillance, enhancing the ASE's market surveillance procedures and systems and identifying the roles and responsibilities of the JSC, ASE and SDC in market surveillance

II. PROJECT OBJECTIVES, SCOPE AND DELIVERABLES

NASD was contracted by the AMIR Program to assist in the development of an effective market surveillance program and specifically "to provide recommendations aimed at enhancing market surveillance of the Jordanian Capital Markets, particularly the market surveillance capabilities of the ASE."

To this end, the Scope of Work calls upon NASD to deliver the following:

- Recommendations on the respective roles of the JSC, ASE, and the SDC and the necessary linkages between these institutions in the area of market surveillance;
- Recommendations regarding changes in the rules, regulations, and/or ASE by-laws concerning market surveillance;
- Recommendations for improvements in ASE market surveillance policies, procedures, processes, and systems;
- Recommendations on how technology may be employed and/or augmented to support ASE's market surveillance responsibilities;
- Recommendations on how best to proceed with technological enhancements (e.g. upgrade existing systems and/or develop or procure new systems); and
- Pre-requisites and other guidance for implementing the recommendations above.

III. DEFINITION OF "MARKET SURVEILLANCE"

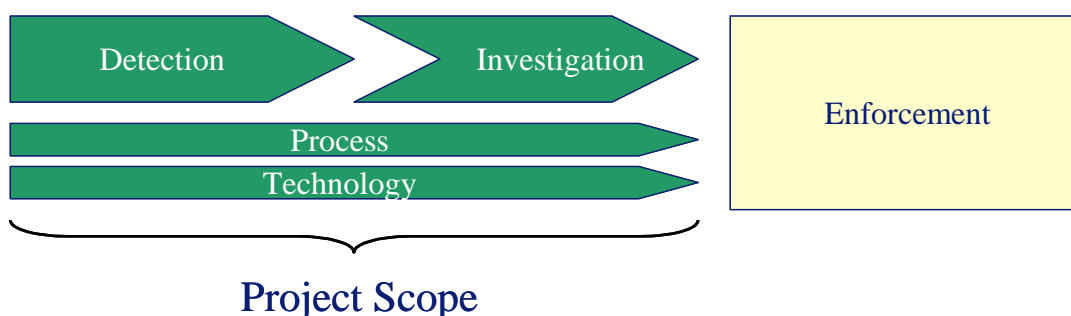
For purposes of this project, "market surveillance" is defined to encompass the processes and technologies that support the detection and investigation of potential

trading rule violations, whether defined in statute or marketplace rules.¹ In the Jordanian market, these trading rule violations are defined at a high level in the Securities Law of 2002 (hereafter referred to as “the Law”) and with more specificity in the Code of Conduct for the Amman Stock Exchange (hereafter referred to as “the Code of Conduct”).

This report also addresses the allocation of market surveillance-related enforcement responsibilities; however, development and elaboration of the specific processes and technologies that might support such enforcement actions are beyond the scope of this project. . (The scope of the project is presented graphically in Figure 1.)

The term “enforcement” as used in this report means initiating a formal, due process proceeding to charge a violation against a legal or natural person and, if found guilty, to impose some form of sanction.

Figure 1 – The components of market surveillance



IV. ALLOCATION OF MARKET SURVEILLANCE RESPONSIBILITIES

Background: One central objective for this project is to recommend the possible allocation of market surveillance and associated enforcement responsibilities between the JSC, ASE and SDC. As a practical matter, this report will focus on the JSC and ASE; the SDC is a key source for market surveillance data, but is not responsible for carrying front-line market surveillance for trading rule violations. Rather, the SDC is responsible for monitoring and enforcing participants’ compliance with its own body of specialized rules.

In developing its recommendations on the allocation of responsibilities between the JSC and ASE, NASD considered a variety of factors including relevant laws and by-laws; criteria such as jurisdiction, effectiveness and deterrent value, and international practice. Each of these are discussed in the three sub-sections that follow below (“The Law and By-Law are not definitive,” “Criteria to be considered in allocating responsibilities,” and “International experience offers a variety of models.”) Following these sub- sections, the report turns to specific recommendations on the allocation of market surveillance responsibilities.

¹ Put differently, the reference to “trading rules” does not refer solely to the Trading Rules of the Amman Stock Exchange.

The Law and By-Law are not definitive

The Law and the Internal By-Law of the Amman Stock Exchange (hereafter referred to as “the By-Law”) admit multiple possibilities for the allocation of market surveillance responsibilities. The Law makes clear that the JSC has jurisdiction over market surveillance activities (see, for example, Articles 8 and 21), but leaves open the possibility that the surveillance itself – i.e. detection and investigation -- could be performed by the ASE (see, for example, Article 68). A review of the By-Law (see, for example, Articles 5, 27, and 35) makes clear that the Exchange has the authority and obligation to perform market surveillance functions.

Criteria to be considered in allocating responsibilities

Given that the Law and By-Law are not definitive, the appropriate allocation of market surveillance responsibilities should be considered in light of several criteria that affect the overall effectiveness of the market surveillance effort. These are discussed below. It should be noted that these criteria are not necessarily mutually exclusive and may influence each other in some instances.

Jurisdiction

A key factor in allocating elements of surveillance responsibilities is jurisdiction. As a general principal, market surveillance responsibilities should be allocated in a fashion that reflects entities’ jurisdictional reach. In this regard, and in the context of market surveillance, jurisdiction can be thought of in at least two ways: 1) jurisdiction to conduct an investigation of a particular person or firm, i.e. jurisdiction to request and receive information and question individuals regarding a potential violation and 2) jurisdiction to carry out an enforcement action.

The JSC enjoys broader jurisdiction in both respects. With regard to the former, the JSC has the authority to investigate any person or entity within Jordan; the ASE by contrast has authority to investigate only its members. In addition, the JSC has broad regulatory powers to obtain information -- e.g. customer names, insider trading information, and position information -- that could facilitate more effective detection and investigation of certain types of activities. Disclosure of customer identity or position information to the ASE on a blanket (as opposed to case-by-case) basis is controversial in at least some quarters since it would give the market substantial insight into the behavior of individual investors.

With respect to enforcement, governmental regulatory authorities typically have broader reach than an exchange or SRO. In the case of Jordan, the JSC has the authority to sanction private investors, company insiders, and listed companies; the ASE’s authority is limited to its members and their employees. (The ASE could extend its jurisdiction to listed companies, in certain respects, by amending the listing agreement. This is discussed further in Recommendation 8)

Deterrent effect

Another important element to consider in allocating responsibilities is the deterrent effect that allocation will have on potential “bad actors.” For example,

if one entity is perceived to better understand the market and the ways in which it can be manipulated, knowledge that that entity is performing detection activities may have a greater deterrent effect than if another organization performs the same task.

For example, in the United States, part of the rationale for having exchanges perform primary surveillance activities is that they are better positioned to understand how the market mechanisms might be abused through fraudulent or manipulative trading practices. Likewise, the exchange's proximity to day-to-day operations (and the intermediaries) builds a reservoir of knowledge and heightened sensitivity to emerging practices that are questionable.

When the issue is enforcement, however, a government regulator with broad sanctioning authority, including the capacity to recommend or pursue criminal sanctions, may be a stronger deterrent to aberrant behavior than an organization with comparatively less stringent remedial remedies available.

Organizational capacity and efficiency

An organization's capacity to implement assigned responsibilities is obviously also a critical consideration. "Capacity" in this context refers to a variety of factors, including:

- the staff's subject matter expertise;
- the availability of appropriately skilled staff;
- the effectiveness of the organization's internal processes; and
- the effectiveness of the organization's technology tools.

International experience offers a variety of models

Internationally, different jurisdictions have chosen to allocate market surveillance responsibilities differently. While there are certain commonalities in terms of exchanges' surveillance responsibilities, there is no single recognized "best practice" standard for the allocation of "front-line" responsibilities between an exchange and its regulator(s). Instead there is an array of practices that reflects the circumstances and history of each market.

In general, most exchanges are responsible for monitoring their markets to ensure that they are orderly and fair and that exchange rules are upheld. In practice, this means that exchanges are typically responsible for ensuring that the trading system itself is not used in a fraudulent/manipulative manner and/or to disrupt the orderly conduct of trading in listed securities. In addition, the exchange is responsible for ensuring that the data entered into the system and reported to data vendors is accurate, complete, and properly sequenced. This can include monitoring for irregularities ranging from the entry of fictitious orders to keystroke errors. Data integrity is also critical for audit trails that form the basis for electronic surveillance.

Three different models for allocating market surveillance responsibilities are presented below.

United Kingdom

In the United Kingdom, exchanges are responsible to “deter, detect, and monitor the incidence of market abuse” (i.e., insider trading or manipulative practices). The actual investigation and enforcement of market abuse lies within the realm of the Financial Services Authority (FSA or other agencies such as the Serious Fraud Office, where appropriate). In practical terms, this means that exchanges generally make referrals to the FSA at a very early stage, having performed only basic analysis to confirm that a surveillance alert was not generated by, for instance, an input error. The FSA has executed Memoranda of Understanding with the various exchanges that delineate the specific responsibilities of the FSA and the exchanges. In some cases, the FSA and an exchange may investigate a case jointly.

Exchanges retain the right (and responsibility) to investigate breaches of their rules that do not constitute market abuse, for instance where a firm has a history of late reporting of trades. In such cases, the exchanges may impose disciplinary sanctions, subject to appeal to an independent appeals panel. In contrast to the FSA, the relationship between exchanges and their members is contractual, and as such the exchanges do not have licensing powers over firms or individuals. However, the contractual relationship authorizes the exchange to access member records and compels the members to cooperate with regulatory inquiries.

Singapore

In Singapore, the Monetary Authority of Singapore (MAS) exercises broad regulatory authority over the Singapore Exchange Ltd. (SGX). MAS is the statutory regulator and administers the statutory law regulating the capital markets. MAS also maintains oversight of SGX's regulatory responsibilities and seeks to ensure that there are no gaps in the overall regulatory framework. SGX has direct and frontline regulatory responsibilities of the securities and futures markets, and over the broker-dealers who trade on the exchange.²

With specific respect to market surveillance, both MAS and SGX perform surveillance; however, SGX, as the frontline regulator, performs the primary surveillance role with MAS performing selective surveillance to ensure that SGX is performing its responsibilities effectively. (MAS utilizes its own surveillance system for this purpose.)

If, on the basis of its surveillance, SGX believes that further action is warranted to address an apparent violation (e.g., civil prosecution by MAS or criminal prosecution by the Commercial Affairs Department), the Exchange refers the matter to MAS. The Exchange will take action against a broker if it has breached Exchange rules, but only after MAS informs the Exchange that the Exchange is free to do so.

² This description draws heavily, and at times in verbatim fashion, from a speech made by the Deputy Managing Director of MAS at the Investment Fund Awards in 2001.

The MAS has the power to pursue civil prosecution of listed companies that fail to make timely disclosure of material information, and of any participants suspected of market misconduct. The civil remedy regime for insider trading also covers other forms of market misconduct such as market manipulation, or the employment of fraud and deceit in dealing. A civil remedy, which lowers the burden of proof against offenders, complements the framework of criminal remedy for offences under securities law.

The ASE has indicated that it is considering demutualizing at some point to become a for-profit exchange. In Singapore, the Exchange has demutualized and the existing allocation of regulatory responsibilities is intended, among other things, to address the conflicts of interest that can arise in a for-profit exchange.

United States

In the United States, the United States Securities and Exchange Commission (SEC) enjoys broad regulatory jurisdiction, but delegates substantial responsibilities to self-regulatory organizations (SROs) which are then subject to SEC oversight. This arrangement reflects, in part, the historical role of exchanges as the front-line regulatory organizations, an arrangement that predates the SEC and that was recognized and carried forward in the SEC's authorizing legislation.

The SEC's powers vis-à-vis SROs include specific statutory authority to

- grant, deny or withdraw SRO status;
- approve all SRO rules and rule changes;
- impose new rules on SROs;
- discipline SROs for not complying with US securities laws or for failing to enforce SRO rules;
- hear appeals of SRO disciplinary actions and membership denials;
- inspect SROs and oversee the SROs' examination of their members with the authority to conduct examinations directly; and
- enforce SRO rules directly if the SRO is unable or unwilling to take appropriate actions.

The SEC has very limited internal equity market surveillance capabilities. Instead, it relies on each SRO to perform front-line surveillance and investigation. In those instances where the SRO has jurisdiction over the individual or firm alleged to have committed a violation, the SRO will typically take enforcement action. Nonetheless, the SEC may institute parallel proceedings if it deems such action warranted. In cases where the SRO does not have jurisdiction over the firm or person, the SRO will refer cases to the SEC (or Justice Department) for further investigation and enforcement action. This is most likely with respect to insider trading cases.

In addition, as noted above, the SEC has broad oversight powers and will inspect SROs to determine the adequacy of their market surveillance capabilities. If the SEC identifies serious or systemic shortcomings in an SRO's detection, investigation or enforcement program, the Commission will typically impose a sanction under which the SRO agrees to undertake a series of measures to improve its surveillance, sometimes including a commitment to spend a prescribed minimum amount of money on upgrading surveillance capabilities. Otherwise, the output of the SEC's inspections may be limited to recommendations as to improvements in process or technology dedicated to regulatory activities.

Based on an analysis of the factors noted above, the report will now turn to specific recommendations on the allocation of market surveillance responsibilities.

Recommendation 1 – JSC should retain ultimate jurisdiction in market surveillance

Recommendation

The JSC should retain ultimate jurisdiction in market surveillance. In the context of market surveillance, "ultimate jurisdiction" means the JSC has the authority to

- Enforce the ASE's rules directly against members and associated persons if the Exchange is unable or unwilling to take appropriate actions;
- Inspect the ASE and oversee the ASE's market surveillance activities;
- Approve or reject ASE or SDC rules and rule changes related to market surveillance;
- Impose new rules on the ASE or SDC if the Commission believes such rules are necessary to ensure the effectiveness of market surveillance and when the ASE or SDC is not taking appropriate steps to introduce such measures in a timely manner;
- Discipline the ASE or SDC for not effectively discharging its market surveillance responsibilities and tasks³; and
- Hear appeals of ASE market surveillance-related disciplinary actions.

(As noted above, NASD's recommendations on the allocation of market surveillance responsibilities focus on the JSC and ASE. The references to the SDC above are intended to clarify that the JSC has authority to take action if the SDC adopts measures or practices that would hinder the provision of data necessary for effective market surveillance, for example if the SDC were to adopt a rule that precluded it from sharing information identifying the beneficial owner of a security.)

Rationale

Securities markets need effective regulation and such regulation is nearly universally viewed as, ultimately, a responsibility of the national government. This view is also

³ "Tasks" refers to the provision of data.

clearly held in Jordan and is captured in Article 8 of the Law which states that the Commission is charged with:

1. “Protecting investors in securities;
2. Regulating and developing the capital market to ensure fairness, efficiency and transparency;
3. Protecting the capital market from the risks it might face.”

To carry out these functions, a regulator needs appropriate powers, a point captured in IOSCO Principle 6.1.3 which states, “(t)he regulator should have adequate powers, proper resources and the capacity to perform its functions and exercise its powers.”

In NASD’s view, the powers outlined above are necessary and adequate to provide the JSC with the tools necessary to execute its responsibilities. In broad terms, these authorities give the Commission the power to affect the activities of all players in the securities markets, from investors to issuing companies to the Exchange to intermediaries.

Implementation

Additional legal authorities to carry out the JSC’s mandate do not appear necessary at this time.

Recommendation 2 – JSC and ASE should consider allocating market surveillance responsibilities as described below

Recommendation

NASD proposes allocating market surveillance responsibilities between the JSC and ASE as described in detail in the pages that follow. The specific violations discussed were identified by individuals with whom we spoke as priorities for the development of automated surveillance capabilities. NASD proposes three different groupings of responsibilities:

- the JSC would perform detection, investigation, and enforcement for price manipulation, insider trading, pump and dump fraud, front-running research, and insider trade reporting (Recommendation 2A);
- the ASE would perform detection, investigation, and enforcement for front-running client orders and trading away (Recommendation 2B);
- the ASE would perform detection and initial investigation for wash sales/pre-arranged trading (wash sales), marking the open/close (marking), and spoofing. After its initial investigation, the ASE would refer cases to the JSC (Recommendation 2C). The JSC would then decide whether it and/or the ASE should handle the case further.

For those violations where the JSC has primary jurisdiction, but the perpetrator is a member of the Exchange, the ASE should, in consultation with the JSC, consider initiating parallel investigative and, if appropriate, enforcement proceedings.

Note that the recommendations that follow should not preclude information-sharing between the JSC and ASE. Obviously, if the Exchange becomes aware of possible

violations that fall within the JSC's jurisdiction, e.g. insider trading, it should make the JSC aware of such potential violations and vice versa.

In the following sub-sections, the proposed allocation of responsibilities will be discussed in light of the criteria discussed earlier, namely jurisdiction, deterrent effect, and organizational capacity and efficiency.

The implementation of the allocation recommendations presented on the next page is addressed in Recommendation 3.

Table One – Allocation of Market Surveillance Responsibilities
 (“•” indicates front line market surveillance responsibility)

Rule	Activity	JSC	ASE
Price Manipulation			
	Detection	•	
	Investigation	X	X*
	Enforcement: Vis-à-vis ASE members and their employees	X	X
	Enforcement: Vis-à-vis customers	X	
Wash Sales/Pre-arranged Trading			
	Detection		•
	Investigation	X	X
	Enforcement Vis-à-vis ASE members and their employees	X	X**
	Enforcement: Vis-à-vis customers	X	
Marking the Open/Close			
	Detection		•
	Investigation	X	X**
	Enforcement : Vis-a-vis ASE members and their employees	X	X
	Enforcement :Vis-à-vis customers	X	
Spoofing			
	Detection		•
	Investigation	X	X
	Enforcement : Vis-a-vis ASE members and their employees	X	X
	Enforcement : Vis-à-vis customers	X	
Insider Trading			
	Detection	•	
	Investigation	X	X*
	Enforcement: Vis-à-vis ASE members and their employees	X	X
	Enforcement: Vis-à-vis customers	X	
Pump and Dump Fraud			
	Detection	•	
	Investigation	X	X*
	Enforcement: Vis-à-vis ASE members and their employees	X	X
	Enforcement: Vis-à-vis customers	X	
Front-running Client Orders			
	Detection		•
	Investigation		X
	Enforcement: Vis-à-vis ASE members and their employees		X
	Enforcement: Vis-à-vis customers	N/A	N/A
Front-running Research			
	Detection	•	
	Investigation	X	X*
	Enforcement: Vis-à-vis ASE members and their employees	X	X*
	Enforcement: Vis-à-vis customers	X	
Trading away			
	Detection		•
	Investigation		X
	Enforcement: Vis-à-vis ASE members and their employees		X
	Enforcement: Vis-à-vis customers		N/A
Insider Trade Reporting			
	Detection	•	
	Investigation	X	
	Enforcement: Vis-à-vis ASE members and their employees	X	X
	Enforcement: Vis-à-vis customers	X	

* This refers to an ASE investigation performed to determine if action can be taken against a member. Usually this investigation will occur only after the Exchange has been informed of action taken by the Commission or if asked to take action by the Commission. In order to bring its own enforcement action, the ASE must verify that the facts support charging a rule violation.

** This refers to an initial investigation to determine if an alert appears to have merit. Once this determination has been made, the case would be referred to the JSC for further investigation and possible enforcement (the Commission could also request the Exchange to take additional action).

Recommendation 2A: Allocation of market surveillance responsibilities for Price Manipulation, Insider Trading, Pump and Dump Fraud, Front-running Research, and Insider Trade Reporting

Recommended allocation of responsibilities

NASD recommends that the JSC bear primary responsibility for the detection, investigation, and enforcement of 1) price manipulation⁴, 2) insider trading, 3) pump and dump fraud, 4) front-running research cases, and 5) insider trade reporting.

Rationale

Insider trading, pump and dump fraud and price manipulation are violations of fundamental securities laws in virtually every country; in Jordan, Article 108 of the Law prohibits insider trading and front-running research while Article 109 addresses price manipulation and pump and dump fraud. The first four violation categories described above (activities 1 through 4 in the previous paragraph) involve the misuse of price sensitive information for personal gain and undercut the integrity of the marketplace.

The rationale for the proposed allocation of market surveillance responsibilities is several-fold. First, the JSC has expressed strong interest in taking the lead for conducting this surveillance. As the ultimate regulator of the market, it is clearly within the Commission's prerogative to take on those specific market surveillance responsibilities that it chooses.

Second, beyond the basic issue of prerogative, however, the JSC is also best-positioned from a jurisdictional perspective to perform the market surveillance function for all five behaviors in question. Specifically, from a detection standpoint, the JSC's broad access to data – e.g. customer names behind trades as well as lists of corporate insiders and their families – could facilitate automated surveillance. In addition, the JSC can more effectively perform investigations and enforcement because of its broad ability to question and pursue disciplinary sanctions. Typically, the violations described above are perpetrated by individuals outside the securities industry and, therefore, beyond the reach of the ASE.

Third, the array of penalties the JSC can pursue is more likely to dissuade potential violators than those at the disposal of the ASE, provided, of course, that the JSC is perceived as willing to impose those more severe penalties. Specifically, the JSC can, through administrative action impose monetary sanctions of up to JD 50,000. In addition, it can seek the imposition of even

⁴ The essence of price manipulation, as used here, is tampering with the price formation function of the market by the intentional entry and execution of multiple orders that establish a bias or trend in the stock's price. In other words, the manipulator is moving the stock's price artificially, usually over the course of several trading days to achieve an economic benefit. This is distinct from both pump and dump fraud and marking. The former relies on the use of fraudulent news or recommendations to move a stock's price. Marking-the-close relies on manipulation of the close-of-the-day price. Since this price is frequently used for valuing securities positions, marking may be motivated by a desire to prevent a margin call or maintain the value of securities pledged as collateral for a bank loan.

larger financial penalties as well as pursue criminal prosecution. By contrast, the ASE's disciplinary powers are more limited; the exchange can impose fines of up to JD 10,000 and, in severe cases, terminate a firm's membership in the Exchange. Nonetheless, despite its more limited sanction powers, the Exchange should, in consultation with the Commission, consider initiating its own investigation and instituting sanctions if a member of the exchange is involved in a violation.

Recommendation 2B: Allocation of market surveillance responsibilities for Front-running Client Orders and Trading Away

Recommended allocation of responsibilities

NASD recommends that the ASE bear primary responsibility for the detection, investigation, and enforcement of front-running client order and trading away cases. ("Trading away" refers to brokers trading for their personal account through a brokerage other than their employer.⁵)

Rationale

Article 3(9) of the Code of Ethics implicitly prohibits trading ahead of customer orders while Article 16(A) of the Trading Rules prohibits certified brokers and brokers' employees "from dealing in securities, save through the broker for whom they work."

The rationale for the allocation of market surveillance responsibilities proposed above is as follows. First, from a jurisdictional perspective, these violations fall squarely within the ambit of the Exchange. They are violations of the Exchange rules and the perpetrators would be members of the Exchange. As a consequence, the ASE has ample authority to investigate and take enforcement actions. With respect to investigation, entities that are members of the exchange are obligated by Article 31 of the By-Law to respond to its investigative inquiries. They are also subject to its enforcement powers as outlined in Articles 36 through 39 of the By-Law.

From a deterrence perspective, Article 36 of the By-Law provides the ASE with a range of disciplinary options, up to and including suspending or terminating membership in the Exchange. Termination would, as a practical matter, likely end a firm or individual's involvement in the securities industry and, thus, would likely be viewed as a significant penalty.

A key question that remains to be answered is the Board of Directors of the Stock Exchange's (hereafter referred to as "the Board") willingness to impose sanctions on Exchange members. Should the Board demonstrate an unwillingness to sanction members, the JSC should then consider 1) exercising its own authority to impose appropriate sanctions and 2) taking appropriate action against the Exchange.

⁵ "Trading away" can also involve private placement transactions structured between a broker and a client without the knowledge of the employer.

In addition, if there are instances where the ASE sanctions a member, but the range of punishment options available to it under the By-Law are inadequate, then the JSC should consider pursuing its own enforcement action exercising the authorities open to it under the Law.

Recommendation 2C: Allocation of market surveillance responsibilities for Wash Sales/Pre-arranged Trading, Marking the Open/Close, and Spoofing

Recommended allocation of responsibilities

NASD recommends that the ASE be responsible for the detection and initial investigation of suspected wash sales/pre-arranged trading (wash sales), marking the open/close (marking), and spoofing cases. If a preliminary review by the ASE confirms that the case is suspicious, the Exchange should refer the matter to the JSC. The JSC can then decide whether it should handle the case further or refer it back to the ASE for investigation and, as appropriate, enforcement action. (A key criteria in deciding whether a case should be referred back to the ASE for further action is the extent to which the ASE has jurisdiction over the alleged perpetrators.)

Rationale

Wash sales, marking, and spoofing violate Article 109 of the Law and Article 3 of the Code of Ethics.

The primary rationale for this allocation of responsibilities relates to capacity and efficiency. Exchanges are, typically, responsible for monitoring activity in a market to ensure that the market is fair and orderly. This surveillance is usually conducted on an intra-day basis and looks at the market on a trade-by-trade basis. As result of conducting this surveillance, the exchange is well-positioned to detect and address these sorts of violations.

Recommendation 3 – The allocation of market surveillance responsibilities between the JSC, ASE, and SDC should be memorialized in an appropriate document

Recommendation

NASD recommends that the allocation of market surveillance responsibilities between the JSC, ASE and SDC be memorialized in an appropriate document, for example a Memorandum of Understanding (MoU). The purpose of this document is to:

- define the responsibilities of the parties, including with respect to front-line detection, investigation, and enforcement on a rule-by-rule basis (for example as in Table 1, above);
- specify time frames for completing tasks in the technology plan (described below in Recommendation 26);
- identify interdependencies between organizations;
- establish appropriate accountabilities, including status reports;

- define appropriate inter-organizational feedback mechanisms, for example on case referrals from the ASE;
- confirm confidentiality obligations;
- define appropriate process(es) for resolving ambiguities, uncertainties, and disagreements about the MoU on a go-forward basis;
- identify principal contact persons for technology and regulatory matters.

In addition, NASD recommends that the initial allocation of market surveillance responsibilities agreed to by the parties be reviewed by the JSC in two to three years to assess its effectiveness and to determine if changes need to be made.

Rationale

For a market surveillance regime involving two separate organizations to be effective, the participants in that regime must clearly understand their respective responsibilities and the linkages and dependencies between them. This understanding *must* be captured in writing. Simple common sense dictates that important agreements between organizations be documented. A written agreement reduces the likelihood of future conflicts. Human memory is fallible. Without a written document, the parties will, inevitably, disagree on specific points and these disagreements could weaken the overall surveillance regime. Moreover, organizations experience personnel turnover. The MoU helps ensure that, even with turnover, there is an authoritative source for information regarding the parties' responsibilities.

In addition, the MoU can serve as a useful management tool within each signatory organization. The parties can use the agreement to assign responsibilities and establish accountabilities to support implementation of the MoU.

With respect to the recommendation on reviewing the allocation of responsibilities, NASD believes that it makes sense, in two or three years, to reassess the allocation in light of the practical experience gained in the intervening period. It may well prove that, on the basis of demonstrated capabilities, it makes sense to shift certain responsibilities between the organizations.

Implementation

The JSC, ASE, and SDC should form an appropriate team of individuals to draft the MoU. From NASD's experience, there should be at least one senior representative from each organization who can provide policy guidance and one or more middle level personnel who can do the actual drafting work.

Once drafting and editing of the document is completed, it should be approved by the Boards of all three organizations and signed by the Executive Chairman of the Securities Commission, the Executive Manager of the Exchange, and the Chief Executive Officer of the SDC. The purpose of this high-level approval is to ensure that all three organizations are fully committed to the document and its implementation.

V. POLICY AND PROCESS RECOMMENDATIONS

NASD offers a number of recommendations to improve both the surveillance of the market as well as to support development of a culture of compliance among member firms. These recommendations are presented below.

Recommendation 4 – Develop process manuals for market surveillance activities

Recommendation

NASD recommends that the JSC and ASE develop formal process manuals detailing the activities their staff must perform for each type of violation for which the organization has full or partial responsibility. (A sample of the type of material that would be included in a manual is included as Appendix 1.)

Rationale

At the current time, there is some degree of formal and informal codification of procedures, e.g., through common practice. Nevertheless, NASD's experience has been that manuals that formally establish procedures and methodologies serve a number of beneficial purposes. First, establishing and documenting procedures helps ensure the overall consistency and quality of the surveillance process. Standardized processes will enable staff to perform their jobs more rapidly, particularly as staff members become more experienced and facile in the processes.

For example, in the areas of investigation and enforcement, staff adherence to sound procedures should improve the quality of the investigation and the evidence gathered. This, in turn, should encourage potential violators to settle matters prior to the completion of the administrative sanctioning process. Sound and consistent investigative procedures should also reduce grounds for appeals by individuals or firms that have been investigated and against whom enforcement actions have been taken. From a management perspective, this is obviously highly desirable.

Second, standardized procedures support effective management and are themselves an important management tool. Individual staff performance can be evaluated, at least in part, based on how well these procedures are followed. In addition, standardized procedures will, over time, facilitate more effective staff allocation and future resource planning as managers gather information about the time it takes to perform various tasks. This will also help evaluate the benefits of using information technology to facilitate detection and data retrieval and analysis. Finally, standardized procedures establish a baseline from which changes can be made, for example in response to new regulatory requirements.

Third, the codification of standardized operating procedures will greatly facilitate the training of staff members. New staff members can review the manual upon arrival to learn about the detection, investigation, and enforcement processes and how they are carried out. Moreover, training programs can be designed around the standardized procedures.

Implementation

Development of a comprehensive set of procedures can be a time-consuming process. NASD suggests that manuals be developed over time focusing first on those violations that are of greatest concern from the perspectives of consistency and quality in the surveillance effort and safeguarding the interests of investors.

Recommendation 5 – Reform process for releasing material news to the public

Recommendation

NASD recommends that the JSC and ASE jointly require that listed companies transmit material (See Appendix 2 for a description of information that might be considered “material”) news by fax – or approved other procedure – to the JSC shortly prior to its release to the public⁶. The JSC would then immediately – i.e. within the timeframe before the news is issued to the public – post this information to its website as well as that of the ASE. This posting would mark the official time at which the news item becomes public.

The JSC and ASE should urge companies to distribute their news during non-trading hours, to the extent practicable, in order to provide maximum opportunity for the market to absorb news items in a manner that does not disrupt orderly trading.

In addition, the JSC should log the receipt of news in a database (together with the consequent price change for the day) to facilitate insider trading surveillance in the manner described below.

Rationale

Insider trading can erode investor confidence in the market. In order to prosecute an insider trading case effectively, it is critical to pinpoint the time when material news moves from the private to the public realm. Without clearly establishing this time, it is difficult to demonstrate whether sales or purchases of securities were made on the basis of public or inside information.

Under current practice in Jordan, establishing the precise time at which news becomes public is difficult. According to the information we received, firms transmit material news to the JSC and/or Exchange, but may release this to the news media prior to its arrival at either the exchange or regulator. This recommendation aims to provide a standard procedure for the release of material news.

In addition, this recommendation facilitates the use of automated detection tools to identify instances of possible insider trading. Specifically, it allows for the entry of information on the timing of the release of news to be factored into an alert engine. In essence, the release of news acts as a trigger for the surveillance system. (The use of news in an insider trading detection system is discussed in greater detail in Recommendations 5, 20, and 21.)

⁶ For reference purposes, The NASDAQ Stock Market, Inc. (NASDAQ) expects to receive news announcements 10 to 20 minutes before they are released publicly.

Implementation

Posting to JSC website

Upon receipt of the news, the JSC should post the news item within a set time frame to a portion of its website specifically dedicated to the display of company news. As noted above, the posting of this news on the JSC website will mark the official time at which news is considered to have become public knowledge.

The introductory page to the site could simply be a list of links to the company news announcement with a short, descriptive title as well as a time and date of posting. From a content perspective, the page might look like the following:

JSC Company News Announcement Home Page

[Company A \(ticker symbol\) announces merger discussions, 3:14 p.m., Date](#)
[Company B \(ticker symbol\) announces earnings, 2:08 p.m., Date](#)
[Company C \(ticker symbol\) announces new product, 9:00 a.m. Date](#)

Posting to ASE website

The JSC and ASE should work to facilitate a posting to the ASE's website in as nearly a simultaneous fashion as possible. In addition, once posted on the JSC website, the news item should be posted on the investors bulletin board as quickly as possible.

Posting to JSC database

Once the news item has been uploaded to the JSC and ASE website, the material news should also be catalogued in a "Corporate News" database. Specifically, for each material news item, the database should include the following:

- company name,
- ticker symbol,
- time and date of posting to the website,
- short description of the news – e.g. merger, earnings, etc., and
- an evaluation of its likely impact on share price, i.e. positive, neutral, or negative.

This information should be entered into the database by the conclusion of the business day on which the news is received.

Personnel requirements

The proposed process implies that there are one or more individuals at the JSC specifically charged with receiving news and posting it to the website as well as an individual to catalog news in database. Further, both the JSC and ASE may wish to consider imposing additional confidentiality and investment disclosure requirements on individuals who enjoy privileged access to news, i.e. access to news before it become public. To this end, the JSC and ASE may also wish to consider putting these individuals' securities trading under heightened surveillance.

News received after the close of business

News received after the close of business should be posted to the JSC's and ASE's website on the first business morning after the news has been received and prior to the start of the next market pre-opening.

Recommendation 6: Require broker-dealers to transmit notification to the JSC and ASE regarding release of research reports

Recommendation

NASD recommends that the JSC and/or ASE require that broker-dealers notify the JSC when they release research on a company listed on the ASE. This notification should include 1) a one-paragraph summary of the report, including the recommendation (e.g. strong buy or underperform) and 2) the precise time of the report's release. In addition, the notice should be transmitted by a set time on the same business day as the release of the report. (If multiple reports are released on a single day, then these reports can be consolidated into a single notification.) The report could be made by fax, e-mail, or other agreed medium, e.g., an on-line form.

Rationale

Public issuance of brokerage research can have a significant impact on the intra-day price of a security. This recommendation will help facilitate the detection of such trading by a brokerage whether this occurs for its own account or the accounts of its clients.

This recommendation will take on increasing importance as the number of broker-dealers publishing research reports grows.

Implementation

In developing the requirement for this notification, careful consideration will need to be given to defining the reports subject to the notification requirement and communicating this definition to the community of broker dealers. In addition, this requirement will impose a small workload on the broker-dealer.

From a process and personnel standpoint, it makes sense to have these notifications sent to the same department and/or individual who is handling the material news announcement discussed above in the insider trading section.

The JSC will need to develop a searchable database to store these announcements.

Recommendation 7: Designate chief compliance officer at each broker-dealer

Recommendation

NASD recommends that the JSC and ASE jointly require that broker-dealers designate a single, senior individual with responsibility for compliance issues. This individual would have overall responsibility for ensuring that a firm has in place an appropriate set of policies and procedures that enable the firm to meet its compliance obligations under Jordanian law, Exchange and/or SDC rules or By-laws.

The responsibilities of the Chief Compliance officer typically include most, if not all, of the following:

- Overseeing development and updating, as well as monitoring implementation, of compliance-related policies and processes, in particular a firm's written supervisory procedures. (Article 31 of the By-Law requires members to "set out in writing internal work procedures designed to control all operations that go through it.")
- Ensuring that a firm's compliance-related reporting to the Commission, Exchange, and/or SDC is filed in a complete, accurate, and timely fashion (if the Chief Compliance officer is sufficiently senior, compliance reports may be transmitted in his name);
- Monitoring changes in law and Exchange and/or Depository compliance-related rules to identify measures affecting the firm and taking appropriate action to implement required changes;
- Establishing and supervising a process for receiving and investigating customer complaints;
- Updating and maintaining a company's code of ethics (if applicable);
- Conducting in-house reviews to test compliance policies and procedures;
- Conducting compliance training for relevant personnel.

It is important to note that the Chief Compliance officer is *not* necessarily responsible for implementing the procedures outlined above, but should have sufficient authority to 1) direct that they be implemented and 2) obtain information necessary to determine whether policies and procedures have been implemented, e.g. in response to a regulatory inquiry. Further, the Chief Compliance officer should have sufficient authority to speak authoritatively for the firm, including handling regulatory interactions with the JSC, ASE, and SDC. Finally, the Chief Compliance officer must document the steps he has taken to fulfill his responsibilities.

Typically, in order to have the requisite authority within a firm, the Chief Compliance Officer reports directly to the Chief Executive Officer (CEO) or, at a minimum, an executive officer of the firm.

Note that the scope, complexity and scale of a firm's business activities will significantly affect the scope, complexity and scale of the Chief Compliance officer's responsibilities. For a small firm, the Chief Compliance officer may also serve in a variety of other capacities, e.g. CEO or CFO. The important point is that the Chief Compliance officer not serve in a customer-facing or trading capacity at the firm.

For example, the scale of written supervisory procedures for a firm with one or two brokers will be much different than for a large firm which may require extensive procedures.

Finally, in line with Recommendation 7, firms should consider making the Chief Compliance officer the primary point of contact for both the Commission and the Exchange when contacting the broker-dealer on a regulatory matter.

Rationale

Comprehensive compliance and supervisory systems constitute the bedrock of effective securities regulation and are critical for investor protection. In this context, a firm's senior management should regard the adequacy of its compliance and

supervisory policies and procedures with the same seriousness accorded to such fundamental operational prerequisites as, for example, capital adequacy requirements.

To develop this ethos, NASD further recommends that regular and significant interaction occur between senior business and compliance officers. As noted earlier, those compliance officers must be empowered with sufficient leverage to oblige senior management to give meaningful consideration to the caliber of a member's compliance and supervisory systems.

Implementation

NASD recommends that the requirement for the appointment of a Chief Compliance Officer be mandated by both the JSC and ASE using appropriate vehicles.

In order to facilitate implementation of this provision at the firm level, the JSC and ASE should consider one or more of the following measures:

- Announcing requirement with sufficient lead-time, six to twelve months, to allow firms to prepare adequately;
 - Provide comprehensive information about the role and responsibilities of the Chief Compliance Officer;
 - Provide a training class(es) to help firms prepare individuals for the responsibility
- Phasing-in requirement first for larger firms and then smaller firms;
- Phasing-in the responsibilities of the Compliance Officer incrementally over a set period, such as 12 to 18 months, or other appropriate period.
 - In order to do this, the JSE and ASE might agree on the priority areas that they would like the Compliance Officer to focus on initially.
 - Thus, for example, during the first six months, compliance officers might focus on development of written supervisory procedures addressing five high priority areas; during the next six months they might focus on the implementation of those procedures as well as the completion of the written supervisory procedures.
 - The Compliance Officer's effectiveness in achieving the goals laid out through this process could then be reviewed as part of the JSE's firm examination program.

Recommendation 8: Require listed companies to respond promptly to regulatory inquiries through designation of chief compliance officer at each listed company

Recommendation

NASD recommends that the JSC and ASE jointly require that listed companies designate a single, senior individual as the principal point of contact for regulatory inquiries from both the JSC and ASE, e.g. for inquiries regarding possible insider trading. (Clearly, the firms should also be required to report immediately any changes in the designated person.) The individual in this position must be sufficiently senior to respond authoritatively for the firm. In addition, this individual, or their designee (should they be out of the office), must respond rapidly to inquiries. The JSE and ASE

should agree upon a timeframe that constitutes “rapid.”⁷ (See Appendix 3 for the requirement imposed by the Singapore Stock Exchange (SGX) in this regard.)

Rationale

The prevention, identification, and prosecution of insider trading is one of the key functions of securities regulators. Effective insider trading regulation can help promote investor confidence in the fairness of a market and can be an important element in encouraging foreign investors to entrust their capital to a market.

In order to act in a timely fashion when ongoing insider trading is suspected, or to investigate such potential trading after the fact, regulators must have a reliable source of information at listed firms. From NASD’s experience the most effective way to obtain this information is to have a designated contact at each listed firm with explicitly articulated responsibilities regarding responding to regulatory inquiries.

Implementation

This provision could be implemented in at least two ways. First, the ASE could incorporate the requirement as an element in a firm’s listing contract with the Exchange. This would be a useful vehicle first to establish the firm’s obligation and, second, to put firm management on notice.

With that said, the ASE’s ability to enforce against firms that fail to meet their obligations appears limited at this time. This argues that a second avenue should also be pursued to implement this recommendation, namely the JSC adopting a similar rule, or other appropriate measure. Not only would joint JSC-ASE action reinforce the importance of this provision, JSC action would provide a stronger basis for the Commission to take enforcement action against companies that fail to comply.

Actions vis-à-vis listed firms

This requirement does not impose significant process change or work requirements on listed firms; however, it may represent a substantial change in firm culture. In order to clarify the responsibilities of both firm and the individual under this recommendation, the JSC and/or ASE should hold educational training sessions and disseminate a thorough description either on-line and/or on paper. Once these meetings have been held and descriptions distributed, it does not seem unreasonable for the firms to have these appointments made within four months.

Once selected, the firm should transmit the contact’s name, office phone number, mobile phone number, home number, and e-mail to the JSC with a copy to the ASE.

Actions within the JSC and ASE

At a practical level, several steps may be useful to implement this measure. First, the JSC and ASE should designate selected staff to perform this function and assign them primary and secondary responsibility for specific firms. (The secondary person would contact a firm if the primary is out.) The staff should be introduced to the relevant firm official(s) first through letter and then by phone.

⁷ NASDAQ’s Marketwatch unit, for example, expects the designated contact at a firm, or his alternate, to respond to an inquiry within one hour.

In addition, the JSC and ASE should establish written procedures that clearly articulate a process for contacting a firm, tracking the contact, and documenting its results. For example, the procedures should spell out when and under what circumstances the firm may be contacted and the internal approval(s) required, if any. Further, the procedures should articulate the information to be collected and the manner in which it should be documented and stored. NASD recommends that the JSC and ASE each establish a database for this information and a standard, electronic form to be used (See Appendix 4 for content elements for this form).

In addition, it is critical that employees with this potentially highly privileged access to confidential information operate under strict rules to prevent the misuse of such information. To this end, the JSC and ASE may wish to consider putting these individuals' trading activities under heightened surveillance.

Although this is obvious, it bears restating that these individuals will be contacting senior executives at listed companies. The JSC and ASE should select individuals who will represent their organizations professionally and ably during their interactions. The JSC and ASE may wish to consider training these individuals for such calls, perhaps through a series of role-playing training exercises.

Finally, the JSC and ASE should announce and conduct test calls to evaluate firms' responsiveness. Firms that prove unresponsive should be notified and required to rectify the situation.

Recommendation 9: Develop sanction guidelines for trading and other violations

Recommendation

NASD recommends that the JSC and ASE establish sanctions guidelines to document the factors to be considered in imposing sanctions via the disciplinary process. (See Appendix 5 for excerpts from NASD Sanction Guidelines.)

Rationale

NASD's experience suggests that formal sanctions guidelines can be a valuable tool in the enforcement process, for at least two reasons. First, the guidelines can help ensure that sanctions are consistently and fairly applied. The guidelines do not prescribe fixed penalties; rather they provide direction, for example, by describing a range of sanctions that can be applied depending on the factors involved in a given case.

Second, the guidelines are a useful tool in negotiating settlements. The guidelines can be an incentive to settle since, typically, settled cases result in lesser sanctions than fully litigated cases.

Implementation

The sanction guidelines could be developed by appropriate staff groups within both the JSC and ASE. The members of the groups should include relevant business and legal experts.

Recommendation 10: Prohibit joint customer-broker accounts

Recommendation

NASD recommends that joint accounts between brokers and their customers be prohibited. Joint accounts established for the purpose of allowing customers to trade on margin should be converted into individual accounts (or another form of permissible joint account). The account holder(s) should then enter into a contractual arrangement with the broker that enables that broker to implement margin calls, but otherwise circumscribes the broker's ability to access the customer's account.

Further, the Exchange should require that all brokerages convert joint customer-brokerage accounts into individual accounts (or permissible joint accounts) by a date certain. At the conclusion of this time, firm management should be required to certify that all joint customer-brokerage accounts have been eliminated or, if this cannot be done, explain why not and establish a date certain when this will be completed.

Rationale

Joint accounts between brokers and their customers should be prohibited because such accounts are easily subject to abuse and there is no longer a rationale for their continuation. With the newly published margin regulations, customers can enter into a contractual arrangement that allows the broker to implement margin calls and liquidate the position if additional margin is not provided by the specified date. This eliminates the need for a broker to have a joint account with a customer to access these securities.

Implementation

This provision could be implemented through an amendment to the Law, By-Law, Code of Ethics or other appropriate vehicle. Given that most provisions related to brokers' treatment of customers is governed in the latter two documents, these may be the most appropriate vehicles. Moreover, amending these may prove easier than amending the Law.

In order to ensure that customer margin account contracts are fair, the Exchange should consider a) establishing principles regarding the content of such a contractual agreement should contain, b) requiring that each firm develop a standard agreement that will be used for all customers and/or c) developing a standard margin agreement that could be used by *all* brokerages for their margin accounts.

Recommendation 11: Require broker-dealers to submit their employees NINs to the JSC and ASE

Recommendation

NASD recommends that the JSC and/or ASE require ASE member to submit their employees' national identification number (NIN) to the JSC and ASE. Further, the firms should be responsible for informing the Exchange when an employee leaves the firm and to provide new employees' NINs within an appropriate, short time frame, e.g. within one week of their hire.

Rationale

This requirement could facilitate detection of two types of rules violations: trading away and front-running research reports. Trading away is addressed by Article 16(A) of the Trading Rules and prohibits certified brokers and brokers' employees from trading securities other than through the broker for whom they work. Through the use of the employee's NIN, it would be possible to institute a surveillance program to determine if such trading occurs.

Front-running research reports is addressed by Article 109 of the Law that prohibits the use of "insider or confidential information for material or moral gain." The NIN information would allow the JSC to identify trading by a firm's employees in a stock regarding which their employer had recently issued a research report.

Implementation

This requirement could be implemented by the issuance of a requirement for the firms to provide the NIN information to the JSC and ASE.

Both the ASE and JSC would need to develop a database to store this information.

Clearly it would be important to protect the brokerage employees' privacy so it is important to note that the Exchange would not receive position information

Recommendation 12: Establish JSC oversight program over ASE and SDC through the adoption of formal review procedures

Recommendation

NASD recommends that the JSC formalize the process for performing oversight of the ASE and SDC. The Law makes clear that the JSC has jurisdiction over and can perform oversight activities vis-à-vis both the ASE and SDC. In order to perform this function effectively with respect to market surveillance, the JSC should structure its oversight activities to assess the degree to which the Exchange has fulfilled its responsibilities as defined in the Law, By-Laws, and in the MoU described above in Recommendation 3. In addition, the JSC should make recommendations in such other related areas as it deems relevant to the Exchange's effective discharge of its responsibilities.

The review should be conducted on a regularly scheduled basis. As an initial step, NASD recommends that the JSC's oversight of the ASE consist of two major elements: quarterly and annual reviews.

The first element of the oversight regime would consist of the ASE's preparation and transmittal of a quarterly report that outlines the potential rules violations for which it has detection responsibility that the Exchange identified through its surveillance program. These violations should be presented on a case-by-case basis over the preceding two months. The report would also include a brief statement of each case's disposition, including a discussion of any enforcement actions pending or taken. The report should also identify trends, if any, in classes of cases over time, e.g. is the number of trading away cases increasing, decreasing or consistent with prior periods.

In addition, the report should detail any activities by the Exchange to advance towards objectives previously set as, for example, in the MoU described above in Recommendation 3.

The purpose of this report is to provide the JSC with a quick and routine overview of the Exchange's market surveillance activity. (As a practical matter, this knowledge may already exist given the close proximity and working relationship between the JSC and ASE.) This reporting serves both parties. It enables the exchange to document its accomplishments and enables the JSC to spot possible emerging issues of potential regulatory concern. These issues could include, for example, new types of market behavior and/or failure by the Exchange to exercise its disciplinary powers in a timely and efficient manner.

The second aspect of the oversight regime would be an annual inspection. The purpose of this conference would be to assess the overall adequacy of market oversight – inclusive of the detection, investigation, and enforcement functions.

The annual inspections should focus on the integrity and utility of market data that comprises the audit trails of transactions and orders. For example, concentrations of order cancellations among individual firms may be symptomatic of sloppy business procedures and inadequate staffing, or intent to manipulate. Similarly, the JSC should be satisfied that market data being collected is adequate and actually used to detect the specific violations for which the Exchange has front-line responsibility. Thus, for example, if a substantial proportion of trading cases originate with a complaint rather than the output of the surveillance system, this would suggest that the parameters for automated detection require recalibration.

Another aspect of the inspection would entail reviewing the time required to complete trading violations investigations, from initial detection through investigation to conclusion of enforcement action. This sort of analysis should be performed by grouping case output according to the violation category. If, for example, it is found that detection and investigation normally requires 30-45 days for serious trading violations while initiation and conclusion of enforcement action requires four to six months, it is certainly appropriate to inquire into the reasons for the time needed to conclude enforcement matters.

The foregoing are meant to be examples of some areas that should be covered in routine inspections conducted by the JSC. Clearly, further measures need to be fleshed out in developing an inspection program.

Results should be confidential between the Commission and Exchange unless the Commission finds that the Exchange's market surveillance is seriously flawed, warranting a major disciplinary action. (Appendix 6 contains an SEC press release announcing such measures against an SRO in the United States.)

The JSC should, of course, also reserve the right to make unscheduled inspections if it knows, or has reason to believe, that, for whatever reason, the Exchange is failing to implement its surveillance responsibilities and that such failure poses a material threat to the integrity of the marketplace.

In order to implement this oversight program, the JSC should develop a formal set of review procedures for its oversight of the Exchange. These procedures should stipulate the general areas of Exchange activity that will be examined, the frequency with which reviews will be performed, the appropriate documentation to be sought during a review, as well as resolution

Rationale

At this point in time, the JSC and ASE are tightly connected through a network of informal personal ties, aided by the organization's close proximity to each other. As a result, the JSC appears well informed about activities at the ASE. Over time, however, these connections will evolve and the Exchange and JSC may no longer have the same proximity. These changes may reduce the JSC's insight into the ASE activities. In order to prevent that from happening, the JSC and ASE should move towards a more formalized and structured oversight relationship.

As noted above in Recommendation 1, the JSC exercises authority over the ASE. In order to wield this authority effectively, an oversight program is necessary 1) in order to ensure that the Exchange is discharging its duties responsibly, and 2) to ensure that the JSC has processes in place to ensure that that is, in fact, the case.

Oversight should be performed on regular rather than *ad hoc* basis and using clear procedures. First and foremost, effective regular oversight should enable the JSC to identify and resolve issues before they become major problems. Mandating prompt remedial action is far preferable to fixing a problem well after the fact with the likely attendant loss of public confidence in the market should a problem become widely known.

Second, the use of clear, established procedures are an effective management tool. Procedures help ensure consistency from one exam to the next, facilitate staff training and performance evaluation and support effective resource planning.

Implementation

A critical challenge for all oversight agencies is ensuring that oversight is effective – i.e. performed by a knowledgeable staff with appropriate tools – without becoming so invasive or burdensome as to compromise the surveillance activities of the organization being reviewed. In this vein, oversight activities must be appropriately scaled to the sophistication and resources of the market.

In an optimal situation, oversight presents an important opportunity for dialogue between a regulator and its regulatee regarding policies, priorities, and processes.

Recommendation 13: The JSC and ASE should rapidly publicize enforcement actions against firms and individuals

Recommendation

The JSC and ASE should rapidly publicize disciplinary actions resulting from market surveillance and other regulatory activities. These notifications should include the name of the firm and/or individual involved. (See Appendix 7 for samples of NASD enforcement-related press announcements.)

Rationale

NASD's experience has been that rapidly publishing disciplinary activities heightens their news worthiness and, through the medium of public distribution, maximizes the deterrent effect of those actions. Most brokerages and employees simply do not want to see their names in print in a negative light. Moreover, from an investor standpoint, immediate publication of sanctioned organizations and/or individuals names allows investors to become alert to problems with their brokers.

NASD applauds the end-of-year publication of violations as the JSC did in its 2003 Annual Report, particularly as this is an effective way to make the public aware of trends in the disciplinary arena. Nonetheless, the news that arises from this publication is likely to focus more on trends rather than specific instances. For the investing public, it is knowledge about these specific instances – and the firms and/or individuals involved – that is particularly important.

Implementation

The implementation of this measure would require that the press office make announcements of disciplinary actions available as quickly as possible after they have been reached and in a manner that achieves their broadest possible circulation.

VI. CHANGES TO ASE BY-LAW

NASD offers several recommendations to modify the ASE's By-Law in order to improve the Exchange's ability to carry out its market surveillance responsibilities. It is important to note that what is significant in these recommendations is their intent and the authority the Exchange needs to carry out that intent. It may be that there are simpler or more effective methods for achieving a particular end than amending the By-Law. This is obviously a decision for the ASE (as are the threshold decisions of whether and in what form a specific recommendation will be accepted).

(Note that implementation, discussed as a separate item in the recommendations in Sections III, IV, and VI is not treated separately here. Implementation is implicit in the recommendation.)

Recommendation 14: Modify By-Laws to support previous recommendations related to member firms

Recommendation: In Recommendations 6 (Release of Research Reports), 7 (Designation of Chief Compliance Officer at broker-dealers), 10 (Prohibition on Customer-Broker Accounts), and 11 (Employee NIN Disclosure), NASD proposes measures that impose requirements on ASE members; those requirements may be most effectively applied through appropriate modification of the ASE's By-Laws.

For example, the Exchange might wish to modify Article 31 to require that member firms designate a Chief Compliance Officer and that this officer be responsible for approving and overseeing the implementation of the internal procedures mandated in that Article.

Rationale: The rationale for each of the recommendations has already been presented; however, the rationale for incorporating the recommendations' requirements into the

By-Laws is that each is sufficiently substantive that their inclusion in the By-Laws is warranted. From NASD's experience, measures that impose substantively significant, but not necessarily operationally onerous, requirements on members are best codified in rule rather than simply through common practice, moral suasion, or requests to members.

Recommendation 15: Modify By-Laws to enhance the Exchange's authority vis-à-vis listed companies

Recommendation: In Recommendations 5 (Release of Material News) and 8 (Listed Company Response to Regulatory Inquiries), NASD proposes measures that may be most effectively achieved by providing the Exchange with the necessary authorities through modification of the ASE's By-Laws.

Rationale: The By-Laws are notably spare in defining the ASE's authority vis-à-vis companies listing on the Exchange. (Note that we have not had the opportunity to review the Exchange's new listing rules and the authority those rules provide.)

In order for the Exchange to carry out its market surveillance responsibilities effectively, the Exchange's authority should be clarified and/or strengthened to ensure that Exchange officials possess 1) the authority to require companies to comply with Recommendations 5 and 8 (as well as others, described below) and 2) the means to sanction companies that refuse to comply. The specific requirements of the recommendations have already been described; however, with respect to sanctions, as discussed in Recommendation 16 below, the ASE should consider providing the Executive Chairman or his designee with the authority to 1) fine the company and/or 2) suspend trading in a company until it complies with a requirement.

Recommendation 16: Provide the Exchange management with authority to sanction a listed company for failure to comply with the legitimate exercise of authority conferred in the By-Laws or elsewhere.

Recommendation: The By-Laws should be modified to provide Exchange management with the explicit authority to take action against a listed company that fails to comply with Exchange rules. The sanctioning authority could include the ability to impose fines up to the ability to suspend trading in a listed firm.

Rationale

In order to operate an effective market surveillance department, the Exchange must have the ability to compel listed companies to comply with Exchange rules and to take prompt action against them if they do not. This recommendation provides such authority. The recommendation not only facilitates the Exchange's surveillance activities, it also protects investors.

VII. MARKET SURVEILLANCE TECHNOLOGY

Background

The systems and processes current employed at the JSC, ASE, and SDC (collectively the Jordan Capital Market or JCM) provide a solid foundation for the development of more sophisticated, technology-based detection and investigation capabilities. The

general observations presented below form part of the basis for the recommendations that follow.

Solid market systems foundation

The JCM technology infrastructure solidly supports the business of running the Exchange. During our visit in Amman we saw:

- a mature network infrastructure connecting the major entities in the market – Exchange, Depository, brokers, issuers, and the Commission (limitations on these connections are noted below in Recommendation 22);
- a solid exchange platform based on GL TRADE, with locally-developed surveillance enhancements;
- a well developed depository system, SCORPIO, built from scratch and tuned to the Jordanian market;
- a developing extranet capability at both the Exchange and the Depository to enable communication with the JCM stakeholders; and
- a strong set of transactional data capture and basic reporting systems.

Minimal surveillance capability, but there are systems to build upon

At present, automated detection and investigation market surveillance capabilities are limited; however, sound data capture and well-developed archival data collection systems exist today, and these could form the basis for an enhanced system. The data capture and archival data collection systems currently support the market surveillance teams in a limited way. The data capture and archival systems at the JSC, ASE, and SDC are described briefly below.

- The Commission collects and disseminates disclosure information, i.e. company news; however this occurs primarily in paper form.
- The Exchange maintains several systems that support the market surveillance team (and other functions, such as finance) today,
 - MIS – a fully developed transactional and audit database of all exchange audit trail data (orders, trades, cancels, states) with reports used to explore and resolve anomalies in the market
 - MAS – a simple but effective real-time surveillance tool that allows analysts to see broker-dealers net position exposure
 - Market Replay – a control program that turns GL TRADE's trading client into a fast, high fidelity market replay tool to enable analysts to reconstruct and fully visualize the market after the fact
- The Depository has a well-developed database of data relevant to both surveillance and analysis, including beneficial ownership data, and insider data.

Process and execution capabilities vary from mature to nascent, depending upon organization

The JSC, ASE, and SDC vary in their technology execution capability.⁸ The differences may reflect the relative priorities of the entities' investments in technology in prior years.

- The Commission has severely limited execution capabilities

⁸ Execution capability is the ability to conceptualize, develop, and operate technology.

- Strong business leadership and support of a technology program
 - Ability to conceptualize needed systems and processes
 - Very limited budget and staff, and except for basic infrastructure, no systems
- The Exchange has a well-developed technology organization with maturity appropriate to the size of the Jordan Capital Markets
 - Has staff that exhibit multiple technology roles (not dependent on super-programmer doing everything)
 - A track record of execution and operation of multiple types of systems (transaction, warehouse, data exchange)
 - Strong technology management
 - Can absorb growth well
- The Depository also has a capable execution organization
 - Multiple technology roles
 - A track record of execution and operation
 - A clear vision of what it needs to accomplish

Recommendation 17 – Extend MIS as the batch detection engine for the Exchange

Recommendation

Establish MIS as the platform for generating alerts for the scenarios to be enforced by the Exchange. This will be an evolutionary process based on the specific scenarios that are to be implemented by the Exchange.

Rationale

The MIS system as reporting database is a market data archive and reporting engine for multiple functions within the Exchange. Today, it is used in a limited fashion to support the Market Surveillance group with specialized reports. Given the limited market volumes and the fact that this database already contains most of the information needed for detection and analysis (market reference data, trades, orders, cancels), it is a good starting point for growing detection and analysis capability.

Market surveillance requires collection of appropriate data in a sufficiently timely manner, detection of events that are possible market abuses, and analysis to affirm or refute the detected events as infractions. A precursor to pulling together the collection, detection and analysis components is to understand the logic necessary to find a specific abuse and to develop models to implement that logic.

There are multiple technical strategies to implement these models. The first step is to separate the models into two categories: those that can be detected using an offline batch system, such as MIS, and those that must be detected in real-time. Offline batch processing implies some delay in the detection process as compared to a real-time process. At the same time, however, it is desirable to push as much functionality as possible onto the batch approach, as it is easier to implement and support.

The key questions that must then be answered for each model is how quickly regulatory action is required and can this be accommodated through batch processing?

Given the volumes in the ASE and, more importantly, the narrow price bands that effectively operate as circuit breakers on a security-by-security basis, it does not appear that real-time surveillance produces significant regulatory benefits relative to the costs involved.

The only model that may have sufficient time urgency as to approach real-time requirements is marking-the-close. Even today, however, identification of potential manipulated closing prices normally occurs shortly after the trading period ends. Thus, if the batch can be run during the time interval between the market close and the close of all post market operations, it will still be possible to modify the official closing price to counteract any apparent manipulation of that price.

The most straightforward approach to implement the batch models is to extend the MIS system. The implementation of batch surveillance capability can proceed incrementally along at least two dimensions. The first dimension is the sequence in which models will be implemented. As indicated above, prioritization of the models will dictate the implementation order. The second dimension is the sophistication of the alerting. Initially, there may be no explicit automated alerting, rather the system could present data in a way that allows an analyst rapidly and easily to identify a situation in which investigation is required. The automated alerting can be added to the system over time.

Implementation

Determine which alert scenarios

The first step is to determine which batch alert scenarios are to be implemented by the Exchange. To repeat, batch alert scenarios are those that do not require real-time detection. (See Recommendation 3 for discussion of surveillance responsibility allocation.)

Complete data collection

The first component of this system is to collect the data necessary to surveillance and analysis in a timely manner. The existing MIS system already does this today with market data (order and trade audit trails). Depending on the ultimate allocation of surveillance responsibilities, it may be necessary to acquire additional data to support detection and analysis, e.g. material news events or beneficial ownership data. Because this data will necessarily come from different organizations than the Exchange, incentives and accountability must be created for the information suppliers to provide this in a timely manner.

Create derived data

The second component of this system is to create any derived data necessary to support efficient detection. Ideally, to maintain maximum flexibility, all derivation would occur as part of detection, but practically this is not always possible. For example, several models require the market inside, i.e. the best bid and best offer, which would be foolish to compute multiple times.

Create reports

The third component is to create query-based reports that select and display the data relevant to a particular model. The intent of these reports is to enable the market analyst to more quickly identify abuse related to a specific model. These reports

should be parameterized by key variables so that the analyst can control the precision of the report. In addition, it is extremely helpful if, where relevant, these reports support a graphic visualization.

These reports will be used for two purposes. Initially, analysts will use the reports to scan for abuses. In addition, once alerts are more automated, they will be useful to support the analysis of a suspected abuse, by looking at, for example, filtered detail records.

Introduce alerting

The final component of the system is to generate alerts, as extensions to the reports generated above. The purpose of the alerting model is to reduce the amount of material that the analysts have to scan manually. The implementation of automated alerts should be prioritized by business case, that is, where the combined cost savings in terms of analyst effort and market risk offset the cost of implementation.

Dependencies

- Recommendation 3 – Agreement on allocation of surveillance responsibilities
- Recommendation 24 – Resolve exchange of sensitive data needed for surveillance
- Recommendation 25 – Establish knowledge engineering team(s)

Recommendation 18 – Develop basic real-time alerting capability for the Exchange

Recommendation

Implement a basic real-time alert system for the Exchange, drawing upon experience acquired through the development of MAS.

Rationale

For those alert models that must be implemented using real-time methods, the first approach should be to determine whether the trading platform vendor would extend the system to implement the detection logic. For example, under appropriate information sharing agreements, the trading system could flag or reject trades that are outside of preset position limits.

If this is not possible, then ASE has two options: to leverage an off-the-shelf system or to acquire a customized real-time alerting system custom. Given that there are few real-time requirements and the complexity of any possible real-time alerts is low, the best path is to implement with specialized programming to implement a simple alerting system.

We do not think that it is not necessary for the ASE to build a general-purpose alerting tool. However, for analyst usability and performance reasons, it would be desirable to have any custom-built alerts reported to the analyst through a common user interface.

Implementation

Determine scenarios that require real-time alerts

The focus in this effort is to attempt to push into the batch world, all alerting that can be moved there. Once the smallest set of real-time requirements is defined, efficient,

customized solutions can be developed. Some careful consideration of implementation approach will be required in order to minimize complexity and level of effort.

Dependencies

- None.

Recommendation 19 – Establish batch surveillance capability at the Commission

Recommendation

Implement a batch surveillance system at the Commission for the detection and analysis of trading and rules violations that fall within the Commission's area of responsibility. We recommend that the MIS system form the foundation for this system. Initial development of the MIS system by the Exchange to perform surveillance functions should be followed by an effort to export this system to the Commission.

The act of transferring a copy to the Commission will involve work – it will not be possible to just make a copy of the MIS system and hand it off. The Commission's version must accommodate, for example, the incorporation of additional types of data to support the Commission's surveillance functions.

Open questions for the JSC and ASE to consider include 1) determining whether or not the Exchange should maintain a common surveillance platform; 2) whether the Exchange should continue to perform development tasks for the Commission's version of the system (not recommended); and 3) whether there should be a collaboration mechanism between two development teams to keep the systems in some form of synchrony, or whether the two systems should be allowed to diverge once the handoff is made.

Rationale

The Commission will be responsible for execution of surveillance for some prohibited actions. Based on the proposed allocation of responsibilities in Recommendation 3, the Commission will only be responsible for batch scenarios⁹. This will require replication of the data from other sources (Exchange and Depository) to feed the surveillance technology.

In practice, the nature of this system will be nearly identical to the surveillance extensions of the MIS system, and will require most, if not all (plus more), of the data in the MIS system that has been extended for surveillance.

Implementation

Analyze alert scenarios to be owned by the Commission

The alert scenarios that are the responsibility of the Commission must have full model requirements developed.

⁹ A batch scenario has no inherent real-time criticality.

Create Commission version of MIS

Once the Exchange has completed its initial development of surveillance capability, a separate activity will be required to make a version for the Commission. The team that performs this packaging should include designates (employees, contractors) of the Commission who will ultimately have responsibility to enhance and maintain the system.

Dependencies

- Recommendation 17 – Extend MIS as the batch detection engine for the Exchange
- Recommendation 20 – Build systems to collect and database non-market data, because it is likely that the Commissions alert scenarios will require this information.
- Recommendation 21 – Capture, store, and catalog material news
- Recommendation 22 – Provide secure batch data transfer capabilities, because much most of the data required by the Commissions systems will come from the Exchange and/or Depository
- Recommendation 25 – Establish knowledge engineering team(s)

Recommendation 20 – Build systems to collect and database non-market data

Recommendation

Create online systems to automate the collection and storage in databases of non-transactional data, such as licensing data, issuer financial filings, disclosures, and complaints. These systems should be accessible and usable by all filers (whether issuer, broker, or other). Where paper originals are absolutely required, collect both electronic and paper as backup.

Source data can be divided into several categories, that which has no obstacles to electronic filing, that which requires paper record for legal or other reasons (e.g., signatures), and that which absolutely cannot be obtained in electronic format.

For the information that has no obvious obstacles, the approach is straightforward and is discussed as part of the Recommendation 23 (Common Platform for Filing).

For information that must have a paper record, we recommend electronic collection with paper backup. There are several approaches to implementing this capability. One approach is to provide an electronic form that is filled out by the submitter and in parallel submitted electronically and printed locally for additional manual processing, such as acquiring signatures. The electronic filing is held in a queue to be validated by the JSC or ASE, as appropriate, upon submission of paper. The paper copy is eventually submitted manually, routed to the approving authority, and eventually filed.¹⁰

There are other alternatives, as well. At least one vendor is making available e-form technology that merges paper and e-filing. Forms are filled online by the submitter and printed for signature gathering. During the printing process the paper is printed

¹⁰ Obviously, there must be a validation step that the paper and electronic forms contain the same data, but automation can help this, as well.

with a 2-dimensional barcode that encodes all the form-data in digital format. When the paper is submitted to the receiving authority, a 2-d barcode scanner scans it, and the actual digital contents are emitted as an XML document that can be automatically routed to backend systems. This preserves the paper nature of the filing, yet avoids the need for error prone re-keying or OCR¹¹ processing.

For information that cannot be obtained electronically, although possibly painful, we assert that every effort should be made to force this information into one of the two categories above. If that is not possible, then JCM is left with either re-keying(re-entering) or scanning/OCR.

Rationale

Much of this non-market data is critical to the detection and analysis phases of surveillance. In particular, the consistent and electronic accessibility of disclosure information is critical to the detection and analysis of several types of prohibited behavior which the Commission and ASE wish to detect..

In addition, a single method for non-transactional data acquisition will provide consistency and enforce processes. For instance, electronic submission guarantees an accurate time-stamped record of the filing and avoids re-keying liabilities and errors. As another example, if collection is coupled to automatic dissemination to interested parties, human-induced latency will be eliminated.

Implementation

Formally document data

Analyze the data elements collected, the frequency of collection, who must file, and the relationships amongst this data. Capture this as formal specifications of business form data.

Determine number of systems to be implemented

Based on the number and type of forms, the workflow associated with processing the submitted data, and the end state of the information, determine the number of systems that will be implemented. In our experience, broker licensing, financial filings, other issuer disclosures, and complaints are often independent systems.

Develop implementation strategy

It is possible to create a common architecture for handling submission of most, if not all, electronic filings. The key elements of this architecture all exist today as off-the-shelf software. So, developing this platform is more a matter of integration.

To keep costs down over the short and long term, we believe it is critical that the JCM adhere to widely accepted encoding standards for content, such as XML or PDF. Different technology providers have different properties, such as, distributed versus centralized, just forms, workflow, and support for external authentication.¹² Regardless of vendor, a key tenet of this approach is that everything related to a

¹¹ To capture character data on paper requires scanning to turn the paper into a bitmap, then an Optical Character Recognition step to identify the actual text (i.e., to make “bytes” out of the “bits”). OCR is only accurate to the 96-98% rate for English. Not sure what it is for Arabic.

¹² Deciding on a technology provider will have a bearing on the ultimate architecture.

specific form is configuration information and the software components represent everything that is common to all forms.

The functions that will be specific to each form are:

- the definition of the form content,
- the definition of the form presentation (layout),
- the validation rules for the form data,
- routing data (what backend system to send the form data to),
- security information (which users can see the form), and
- the data schema of the backend system that holds the form data to support reporting.

The functions that will be common to all forms are:

- rendering form for presentation,
- validating form against integrity constraints (rules),
- routing form to destination, and
- storing form data (either under creation or optional).

A number of technology providers exist that provide these and other features in the electronic forms processing markets; these providers include:

- Adobe (Acrobat, Forms Server, and Workflow)
- HandySoft
- Cardiff
- A number of open source systems around the XForm W3C standard.

Develop implementation plans

Develop system requirements and implementation plans, including time, budget and resources.

Dependencies

- Recommendation 23 – Complete plans to implement extranet at Exchange and Commission
- Common platform for user management (e.g. user log-in and access control) in place.
- Database management systems in place.

Recommendation 21 – Capture, store, and catalog material news

Recommendation

Several important market abuses targeted for implementation are dependent upon knowing the existence and time of market news. The JCM, and in particular, the JSC, should:

- Identify the types of market news relevant to surveillance, e.g. set of disclosure and material news filings that companies are mandated by law to provide (See also Recommendation 5);
- Capture this information electronically and provide search capability for analysis; and
- Catalog this information to indicate the presence of specific material events that are to be fed to the detection systems.

Rationale

Market news is important for several violations, but is critical to insider trading detection and investigation. Market news is used to identify when specific material corporate events become public knowledge.

Market news processing consists of collection, feature extraction, and then integration (fusion) with market data. Often, the collection activity is a matter of subscribing to a data service. However, that option doesn't exist yet within the JCM. Some effort must therefore be expended to identify appropriate sources. The time at which news is made public is a key data element that must be captured during collection.

Once data is collected, the next step is called feature extraction. From the news, processing identifies specific, templated events that are considered material news and associates these with firm information. Examples of material news are, earning announcements, product announcements, and merger/acquisition announcements.

In the U.S. markets that the NASD regulates, we leverage specialized text processing software to perform this function. However, two factors suggest that a manual indexing approach may be best for the JCM in the near term: news volume, and language processing complexity.¹³

Larger markets have substantial quantities of news, which makes manual processing labor intensive and expensive. An additional complication with large volumes of news is managing the consistency of large numbers of "indexers".¹⁴ Consistent identification of material events is important to the surveillance process.

In addition to implementing a feature extraction process, the news itself should be captured and inserted into a database to support the analysis function. If the information originates as paper, JCM will have to rely upon scanning and OCR software. There are numerous capable text retrieval systems, both open source and commercial, that provide keyword search over the data.

Implementation

Identify Material News

Determine the documents that will constitute sources of material news. By and large this will include the regular filings (e.g., disclosures) that must be made to the

¹³ While we haven't done an exhaustive search, we are not aware of any commercial feature extraction software that processes the Arabic language.

¹⁴ An indexer, or abstractor, is the term for an analyst that reads text and identifies key information to capture.

Commission (and Exchange).¹⁵ In addition, this will likely consist of relevant print media.

Capture News Electronically

The news must be captured electronically and stored in a database that provides retrieval capability. The retrieval will support the analysis processes that determine whether a surveillance alert is indeed a violation. For data that is not available in electronic format, such as print media, an electronic record must be created so it can be tracked. This need not necessarily be the full text of the article as long as a metadata record will be created that contains the relevant descriptive and locator information and can be used in databases.¹⁶

Implement Manual Indexing Process

The most expeditious approach is for the JCM to manually catalog news to identify the events of interest to the surveillance systems. Typically, this information will be events like mergers, product announcements, earnings statements, etc. The basic process is well known within Library Science and would be as follows:

1. Document very specifically the types of events that are to be identified from the source text; this is developed in concert with the creation of the alert scenarios that depend upon news events, such as insider trading, trading ahead of research, etc.
2. Develop a data schema for the material information to minimize variability,
3. Design a process to feed the news to a trained set of indexers,¹⁷
4. Develop a system to capture the classification judgments assigned by the indexers,
5. Route the captured information to the appropriate surveillance systems.

Dependencies

- Recommendation 20 – Build Systems to Collect and Database Non-Market Data

Recommendation 22 – Provide Secure Batch Data Transfer Capabilities

Recommendation

Implement a capability to easily exchange data between the JSC, ASE, and SDC on top of the existing shared network infrastructure. This capability should have the following features:

- It should be easy to provision a new type of transfer between parties;
- Data exchange should be access controlled and secure;
- For each type of transfer, well-defined open formats should be defined for the data to be moved;
- Validation and reject processing should be included; and
- Monitoring for anomalous conditions should be included.

Rationale

Collectively, the JSC, ASE, and SDC have invested in a mature network to connect the key market participants. This network is used to provide user-level access to the

¹⁵ See *Recommendation: Build Systems to Collect and Database Non-Market Data*.

¹⁶ This is just ordinary library science.

¹⁷ Train the indexers!

different systems, and it appears in some case to connect systems to each other. Today, however, much data moves between systems via “sneakernet.”¹⁸ Under a stronger surveillance regime, a more automated means of exchanging data between entities will provide a ramp to accelerate implementation and increase reliability of information delivery and thus surveillance.

Basic features that are not addressed with File Transfer Protocol (FTP) will have to be documented and either handled manually or eventually implemented. We believe the implementation of these features is fairly simple. These are:

- Provisioning of a new transfer. Some amount of administrative overhead is standard: allocating disk space for the transfer, enabling appropriate usernames to use the feature, creating transfer areas for handoff to back-end systems.
- Validation and reject processing. It is almost always necessary to provide a mechanism to cull bad data, isolate it, and report back to the submitter that it exists. Closely related to this is the handling of resubmitted, corrected data.
- Monitoring for anomalous conditions. As with other operational systems, attention needs to be paid to, for example, low disk space, down service, and cleanup of dead data areas.

In order to simplify management, enhancement, extension, and optimize cost, we strongly recommend that data transfers be performed with well-documented data formats in, at the least de facto, markup syntax. While no one data syntax can server all uses, the JCM should insist upon vendor-neutral formats, such as, XML, csv, or Unix flat files.

Not only will this decrease the coupling between organizations and technologies (which is a good thing), it enables the use of numerous freely available or inexpensive tools for processing the data. Proprietary binary formats should be avoided at all costs.

Implementation

Determine means of transfer

There are numerous ways to move data between systems on a network, some simple, some more complex. While not the only way to effect transfers, a secure FTP provides a very capable mechanism. The organizations involved should agree on a mechanism for transfer; the infrastructure that needs to be procured, if any; the organization that will implement any custom code; and the organization that will manage the facility.

Create project to implement system

Once the general architecture and management conditions are resolved, the next step is to start a project to implement the system.

Dependencies

- None.

¹⁸ Floppy disks or CDs carried manually from one department to another.

Recommendation 23 – Complete plans to implement extranet at Exchange and Commission

Recommendation

The Exchange is nearly complete with the implementation of an Extranet (Portal) for its stakeholders to use to receive and submit information. This capability should be provided for the Commission, as well.

Rationale

The Commission will be responsible for accepting electronic filings and disseminating electronic notices. It makes sense to use the same type of infrastructure at the three organizations in the JCM that all communicate with the same stakeholders.

Implementation

- Establish project to develop extranet for Commission

Dependencies

- Confirmation that the Commission will be implementing other online systems.

Recommendation 24 – Resolve exchange of sensitive data needed for surveillance

Recommendation

It is likely that the implementation of certain surveillance activities by the Exchange would benefit from access to sensitive information, e.g. beneficial owners and/or their positions, or derivations thereof. This information should be made available in a manner that addresses the competing concerns of safeguarding confidentiality versus timeliness and effectiveness of detection and investigation efforts. This may be addressed by:

- Structural approaches, such that surveillance that requires the sensitive information is never performed by an organization that should not have this information (we suspect this may be impractical); or
- Technical approaches to mask the most sensitive aspects of the data yet deliver the required information.

Rationale

An issue that surfaced during analysis is the tension between the need of the Depository to safeguard sensitive personal data and the needs of the Exchange to have access to this data for surveillance purposes. This data consists primarily of position and beneficial ownership information.

To detect the situation where market manipulations are masked by a “bad actor” using multiple accounts, with the same or different brokers, the monitoring authority needs to identify the equivalence of different client accounts. That is, is a single beneficial owner behind different client accounts?

It may be possible for the Depository to make available to the Exchange equivalence class information without necessarily revealing confidential information, i.e. customer names. For example, the depository can provide a table of account information keyed to an artificially created identifier that is distinctly not the NIN,

<account, broker, equivalence_id>.

Alternatively, the Depository can provide a mapping table that contains a row for each equivalence relationship, e.g.,

<broker1, account1, broker2, account2>¹⁹.

Similarly, position information can be keyed to client account information, although this information is more relevant to the analysis function than the detection function.

Implementation

Determine means to make sensitive information available to detection systems

The involved parties should jointly determine the most effective means to address the competing concerns.

Implement solution

Implement the solution determined in the prior step.

Dependencies

- The requirements for the surveillance scenarios.
- The allocation of which organization will implement which scenarios.
- Recommendation 22 – Provide secure batch data transfer capabilities

Recommendation 25 – Establish knowledge engineering team(s)

Recommendation

For each organization that will be conducting detection activities, establish a core team of individuals to work with the business experts, the software experts, and the data itself to prove out the viability of different surveillance models. (See Appendix 8 for sample Knowledge Engineering job description.)

Rationale

The implementation of alerting and analysis capability is a process of experimentation and continual refinement. The process of articulating, in sufficient detail to be implemented in software, a pattern of data that suggests a particular prohibited activity is qualitatively different than the normal requirements engineering process.

This “knowledge engineering” requires skill in working with business subject matter experts to understand the particular rules and the imprecise data patterns that trigger alarm bells for the expert. In addition, knowledge engineering requires skill to be able to understand the underlying data, to manipulate data to draw out the hidden signals, and to create representations that help affirm or refute a particular suspected instance.

¹⁹ In the case where there are more than two accounts per individual, multiple records would be present.

Part of this work is fairly static (e.g., what data will be used for alerts, what algorithms will be used to determine a possible violation) and part of it is very dynamic (e.g., what defines a significant price movement). The static parts are best relegated to a software engineering process, while the dynamic parts are best left to be resolved by the knowledge engineering process.

We recommend that a distinct role be created to separate the knowledge engineering process, or at the very least, to structure the engineering cycle to allow for the necessary refinement associated with knowledge engineering. A typical knowledge engineering cycle for NASD will begin with a business requirement that a certain abusive behavior is detected. The knowledge engineering team will work for approximately three months to determine whether or not the abuse can be detected in the available data. If so, then the patterns that presume to detect this behavior will be released into production provisionally for up to six months. If the pattern proves useful, then it will be made a permanent part of the surveillance portfolio. Eventually, patterns are retired if their usefulness has expired. Note that throughout the whole lifecycle, the performance of patterns are monitored and tuned for effectiveness.

Implementation

Determine structure

Determine which organizations will require such a function, where this function will fit within the organization, and the reporting and service responsibilities of this function.

Establish knowledge engineering function

This function may have to develop slowly, depending upon the available pool of candidates. The initial hires will be critical. JCM should consider training such a person under a mentoring program, if at all possible.

Create cross-functional process for developing, testing, implementing, and updating algorithms

In order for the “knowledge engineering” function to be effective, it must operate in conjunction with both regulatory business analysts (the individuals who monitor the market) and technologists. The business analysts are responsible for describing the activities that need to be detected and providing initial ideas on how they manifest themselves. The knowledge engineer is then responsible for developing an algorithm to detect the behavior. The knowledge engineer must also work with the technologists to implement the algorithm. This will be an iterative process with an algorithm having to go through multiple versions before it “works,” i.e. identifies behavior of concern without producing too many false positives or false negatives.

(At NASD, algorithms are developed and tested in a development environment. Only once they are deemed to be “working” are they “promoted” into the production environment. The decision on whether to promote an algorithm requires the approval of the Executive Vice-President of the Market Surveillance Department. From an oversight perspective, NASD is accountable to the SEC to explain the disposition of all breaks generated by algorithms promoted into production.)

Knowledge engineers can also play an important role in the technology planning process. Knowledge engineers should feed into the technology planning process to help identify 1) the types of data analytic capabilities and 2) the types of additional data, including derived data (explained in the table below), that they may be used in future detection algorithms. The former may affect software acquisition decisions while the latter may affect both data architecture and software decisions; both can affect hardware acquisition decisions.

The following table may be useful in starting to formalize thinking around algorithm development. Completing the table for *each* type of violation the Exchange wishes to detect will help assist in structuring the development of algorithms.

Element Name	Description
Model Name	A short name to describe the violation
Business Description	A business definition of the specific violation with sufficient information to be unambiguous
Cross Segment	Identification as to whether violation occurs in multiple product segments, e.g. if a violation occurs in both equity and derivatives for an issue. This is not relevant (NA) for markets that have only one product segment, of course.
Multiple Market/Cross Market	Identification as to whether more than one market must be monitored to detect a violation, e.g. if an equity trades on two different markets. This is not relevant (NA) for market systems that have only one market, of course.
Source Feeds	Data sources (feeds) that provide the raw data elements necessary to detect and analyze a possible infraction of the specific violation, e.g., order audit trail and/or transaction audit trail, and issue, trader/member reference data.
Entities / Attributes	A further refinement of the source feed table and row that defines what specific data elements are needed by the business rules for this model.
Business Rules	A concise, narrative statement of the alert-generating logic that can be interpreted into algorithm (the trigger event plus other conditions, possibly parameterized and filtered) to detect a possible specific violation. This statement is expressed in terms of patterns in data (source or derived, e.g. identify large customer order or large trade—a large customer or a large trade is an order that trade that exceeds a predefined threshold) and parameters/filters (including thresholds, etc).
Parameters/Filters	Parameters are inputs to an alert-generating algorithm that can be configured (tuned) to adjust the sensitivity and specificity of the algorithm. Typically, these will be calibrated during development, continually monitored as to effectiveness in production, and adjusted as appropriate. Filters are used to include or exclude data based on configurable selection criteria, e.g. date and/or time of trade.
Trigger	In order to minimize computation when large amounts of data are involved, we define some part of the algorithm to be evaluated first to select possible violations for further evaluation. This is a pre-condition that must be met in order to initiate evaluation of a specific business rule.
Alert Details	These are the specific data elements that are compiled and displayed as part of an alert.
Data Time Span for Processing	The length of the time period used by the alert-generating algorithm. Some patterns will require examining multiple days over an extended time period (e.g., three or more days), others patterns may be evident in a single business day.
Data Lookup Period for Analysis	The length of time data (source, derived, and alert data) must be saved to support alert analysis.
Derived Data	Data created by processing source data that is used as input to the detection (analysis) systems, for example, calculation of the inside price (and size) as reflected by the highest order(s) to buy and lowest order(s) to sell at a given point in time. The choice of pre-calculation of derived data or real-time calculation as part of the algorithm is a subtle one. In general, we will err on the side of real-time calculation, which means that the actual implementation may compute more derived data.
Alert Generation Timing (Same Day, Next Day, Later)	Business decision related to the rapidity with which an alert must be made available to the surveillance analyst. For example, is this going to lead to an investigation that make take six months, or does the market need to put a stop to a specific behavior the same day? Obviously, there is a tradeoff between speed of generating the alert and complexity and cost to generate it quickly.

Element Name	Description
Alert Lookup Period	The length of time for which the alert information should be reviewed in totality to determine a pattern of practices when appropriate. It is used to further determine if the violation is caused by coincidental or premeditated actions of the individual involved.
Partitioning by Issue	Can processing of the algorithm proceed independently for each issue?
Complexity	The level of effort to implement the model.
Constraints / Issues	Identification of any confounding realities that may make implementation of this algorithm hard?
Implementation Priority	This is a business decision. How important to the Capital Market is the implementation of detection for this manipulation?

Dependencies

- Creation of projects to implement surveillance.

VIII. NEXT STEPS

Recommendation 26 -- Next steps

NASD recommends that the JSC and ASE take the following steps to begin implementing those elements of this report that they wish to adopt.

The first three steps presented below will be conducted jointly by the JSC and ASE.

- Step 1: Agree on an allocation of market surveillance responsibilities (see Recommendation 3)
- Step 2: Draft and complete a Memorandum of Understanding (or other appropriate document) memorializing the allocation of responsibilities agreed to in Step 1 (see Recommendation 4)
- Step 3: Develop agreement on the priority of surveillance model requirement development effort, i.e. which rule violations the effort should focus on first.

The remaining steps will be performed internally by the JSC and ASE, but will occur in more or less parallel fashion. Coordination between the organizations' activities will be required.

- Step 4: Develop a technology "road map" for the JSC and ASE. This document lays out, at a high level, the organization's projected hardware and software infrastructure requirements; major projects and dependencies. The "road map" outlines, on a quarter-by-quarter basis, deliveries for the development and implementation of each of the organizations' major systems. The roadmap also feeds the budgeting and staffing activities. The "road map" is a dynamic document that will require continual updating and rethinking as new information is acquired, e.g. the requirements for the surveillance capabilities described in Step 5, below.

- Step 5: Perform requirements development based on the priorities identified in Step 3 above. The requirements development includes defining at a logical and data level the detection algorithms²⁰ that would need to be used to identify a potential violation. The requirements development process would also include identifying business user needs, e.g. the types of visualization tools that would facilitate the detection or investigation of a potential violation, and the workflow tracking tools that would facilitate effective management of the surveillance process. The output of the requirements development process will, of course, affect the technology “road map” and must be incorporated therein.
- Step 6: Based on requirements and budget, consider vendor options and make an assessment of whether to build or buy the required software capabilities.
- Step 7: Project initiation. Multiple projects can run concurrently.

²⁰ We call these “surveillance models.”

Appendices

Appendix 1 – Sample Elements of Process Manual

A process manual typically includes the following content elements:

- A description of an organization's overall function and purpose
- A description of the relevant organizational unit's responsibilities, i.e. market surveillance, and their contribution to the achievement of the overall organizational objectives.
- A description of the job responsibilities for each job function within a department
- A high-level description of the major activities to be performed within a department
- A step-by-step description of the activities to be performed; in the case of market surveillance, this would include:
 - A detailed description of the specific behaviors for which monitoring is to be performed, including a description of the ways in which these behaviors would manifest themselves in the data.
 - A description of the steps used to detect a particular rules violation, including, if relevant, instructions on the use of technology support tools. This would also include a description of the relevant forms to be used to document actions and decisions and the appropriate authorization(s) required for decisions.
 - A description of the steps used to determine if a potential violation warrants further investigation and a description of those investigative steps. This would also include a description of the relevant forms to be used to document actions and decisions and the appropriate authorization(s) required for decisions.

A sample of elements that might be included in a market surveillance manual follows below (this is drafted more from a JSC perspective and assumes that the JSC is performing some detection activities). No section is complete, nor does this constitute a recommendation on the appropriate process for conducting market surveillance in Jordan.

Note: Some elements of the manual have been deleted since they contain proprietary process information. These sections are denoted with ellipses (.....).

SAMPLE ELEMENTS OF A MARKET SURVEILLANCE MANUAL

I. INTRODUCTION

A. Objectives and Overall Responsibilities of the Market Surveillance Department

The Securities Law No. (76) for the Year 2002 provides the legal basis for the JSC's activities and defines its responsibilities in relation to the participants and institutions that comprise a modern capital market. More specifically, the Law authorized the JSC to regulate virtually all facets of investment business

conducted in Jordan. Article 8 of the Law identifies the objectives and defines the scope of the JSC's regulatory activities as follows

- o The Commission shall in particular aim to achieve the following:
 - o Protecting investors in securities;
 - o Regulating and developing the capital market to ensure fairness, efficiency and transparency;
 - o Protecting the capital market from the risks it might face.
- o In order to achieve its objectives, the Commission shall assume the following main responsibilities and authorities:
 - o Regulating and monitoring the issuance of securities and dealing therein;
 - o Insuring full and accurate disclosure by Issuers of the material information necessary to investors and relevant to the public issuance of securities;
 - o Regulating and monitoring disclosure including the periodic reports prepared by Issuers;
 - o Regulating licensing and registration, and monitoring the activities of Licensed and Registered Persons in the capital market;
 - o Regulating and monitoring the Stock Exchange and Trading Markets in Securities;
 - o Regulating and monitoring the Center;
 - o Regulating Mutual Funds and Investment Companies

The work of the Market Surveillance Department relates, either directly or indirectly, to the JSC's achievement of all the regulatory goals listed above. Hence, effective operation of this Department is critical to the JSC's overall mission of enhancing investor safeguards and promoting growth and participation in the Jordanian capital market.

The principal tasks of the Surveillance unit are to monitor a broad range of market information to identify potential serious trading violations, conduct preliminary reviews, and refer appropriate matters to the Enforcement Department. Over time, the Department staff will gain valuable knowledge of the trading strategies and economic incentives that drive the trading practices observed in the marketplace. This knowledge should be applied to refine JSC's approach to market regulation, facilitate effective regulation of new securities products, and enhance the Department's procedures and systems for monitoring trading violations.

In sum, the work of the Market Surveillance Department will enable the JSC to provide significant investor safeguards and promote the development of a fair and efficient system for trading a variety of securities products in Jordan.

B. Key Staff Responsibilities

Surveillance Officer Responsibilities Include:

- Keeping abreast of business and market news that could impact trading volumes/price trends in individual securities;
- Gaining a thorough understanding of the factual elements (defined by law) that comprise the violation categories targeted for surveillance;
- Using effectively all research and detection tools provided;
- Plus others

Director of Market Surveillance Responsibilities Include:

- Organizing and directing the work of the Surveillance Department;
- Responsible for overall effectiveness of systems and procedures used to monitor for and investigate trading violations and to monitor issuers' compliance with ongoing disclosure obligations;
- Developing objective performance standards
- Plus others

II. MONITORING FOR PROHIBITED TRADING PRACTICES

A. Prohibited Trading Practices

1. Market manipulation and insider trading – description
2. Delegated authority to the Market Surveillance Department – description

III. MONITORING FOR MARKET MANIPULATIONS AND ILLICIT INSIDER TRADING

This section of the manual will focus on the procedures used to identify trading patterns that may constitute (i) a prohibited form of market price and/or volume manipulation in a security; or (ii) illicit insider trading. Additionally, this section provides guidance on the steps to be followed to investigate the circumstances surrounding the questionable activity that is found, and to document, as far as possible, the factual elements needed to conclude that an apparent violation has occurred. The Surveillance unit will normally rely on its own resources to reconstruct trading and retrieve facts that bear upon the outcome of the inquiry. The staff may also request and use documents and information supplied by broker-dealers and issuers to advance a trading inquiry to its conclusion within the Department.

The Surveillance unit staff should document all completed reviews of questionable trading in a written closing report addressed to the unit's manager. Among other things, the closing report should include Because the Director bears final responsibility for deciding the matter's ultimate disposition within the Department (e.g., closure without further action or referral to the Enforcement Department), he should concur with the recommendation approved by the Manager of the Surveillance unit.

A. Manipulative Trading Practices Targeted for Surveillance and Review

1. Marking the closing price – *(there would be a similar section for each rule violation identified in Recommendation 2)*

This practice refers to orders entered and executed just before a session close (e.g., some time interval such as x-y minutes before the close), at successively higher (or lower) prices, to manipulate or peg the instrument's closing price. The level of a security's closing price is important because The a calendar month or calendar quarter also can be critical dates for valuing an investor's holdings in a security based on a contract or loan commitment. Therefore, particular attention should be paid to the performance of this review Likewise, an imminent secondary offering may provide the incentive to

Ordinarily, to demonstrate intent to manipulate, it will be necessary to document a pattern of marking-the-close transactions by However, the trading pattern associated with this violation may occur sporadically over a period of several trading days or on consecutive days over a brief time period (e.g., trading days). In the case of marking to influence the price of a, the violative trades may occur on Hence, the staff should be alert to these various possibilities and routinely check for

Detection of marking the close can be performed manually by If there are no reported trades during the final X minutes,, to encompass the trade that actually set the closing price along with the immediately preceding trade at a different price to determine In sum, the pattern being sought should reveal:

-,
-,
-

The steps that the staff should follow in conducting surveillance for marking the closing price are:

1. Begin the transaction audit trail for each security to identify a pattern of suspicious transactions,.....
2. Next, review the order audit trail to identify the
 - a. If a pattern is found, request
 - b. Using the information in "a", query the Depository to determine Normally, parties engaged in "marking up" closing transactions will have The existence of any should also be noted in evaluating economic benefit from the marking activity.
 - c. Finally, the analyst's findings and recommendation for disposition should be recorded in a that is sent to the Manager of the Surveillance unit.

To the extent that the ASE's trading system accommodates market-on-the close orders, the Exchange members who accept these orders from customers should make a reasonable effort to verify that the orders have economic substance and are not being done to influence the security's closing price. This determination should be made by analyzing This duty of inquiry is particularly important where, for example,

Similarly, if a firm has committed to fill a client order from its proprietary account at the closing price, that firm should refrain from The existence (or non-existence) of a scheme to manipulate a security's closing price is a matter of The also are important factors that could support an inference of intent to manipulate. As with other forms of market manipulation, marking the close is more likely to be successful in securities characterized by

Appendix 2 – Description of Potentially “Material” Events

NASD Rules require issuers to disclose “any material information which would reasonably be expected to affect the value of their securities or influence investors’ decisions...” “Material” events could include, but are not limited to, the following:

- Financial-related disclosures, including quarterly or yearly earnings, earnings restatement, pre-announcements or “guidance”.
- Corporate reorganizations and acquisitions, including mergers, tender offers, asset transactions and bankruptcies or receiverships.
- New products or discoveries, or developments regarding customers or suppliers (e.g., significant developments in clinical or customer trials, and receipt or cancellation of a material contract or order).
- Senior management changes of a material nature or change in control.
- Resignation or termination of independent auditors, or withdrawal of a previously issued audit report.
- Events regarding the issuer’s securities – e.g., defaults on senior securities, calls of securities for redemption, repurchase plans, stock splits or changes in dividends, changes to the rights of security holders or public or private sales of additional securities.
- Significant legal or regulatory developments.

Appendix 3 -- SGX Listed Company Contact Requirements

Authorized Representatives

- 726 An issuer must appoint two authorized representatives who must be either directors or a director and the company secretary.
- .
- 727 The responsibilities of an authorized representative are as follows: -
- (1) To be the principal channel of communication between the Exchange and the issuer at all times;
 - (2) To supply the Exchange with details in writing of how he or she can be contacted, including home and office telephone numbers and, where available, facsimile numbers. The issuer must notify the Exchange of any changes to such details;
 - (3) To ensure that whenever he or she is outside Singapore, suitable alternates are appointed, available and known to the Exchange, and to supply the Exchange with details in writing of how such alternates may be contacted, including their home and office telephone numbers and, where available, facsimile numbers; and
 - (4) Not to terminate his or her role as authorized representative before notifying the Exchange of:-
 - (a) the proposed termination; and
 - (b) the name and relevant particulars of the replacement
- 728 If the Exchange is not satisfied that the authorized representative is fulfilling his or her responsibilities adequately, it may require the issuer to terminate the appointment and appoint a replacement. The issuer must immediately notify the Exchange of the new authorized representative's appointment and relevant particulars.

Appendix 4 – Contact Report

Name of JSC staff

Rationale for contact

Contact approved by (if required)

Contact approval date and time

Date and time call placed

Date and time call answered by contact or designee

Summary of call content

Action recommendation

Referred to (if action required by other person, department)

Appendix 5 – Excerpted NASD Sanction Guidelines

Table of Contents

Overview

General Principles Applicable To All Sanction Determinations

Principal Considerations In Determining Sanctions

Applicability

Technical Matters

I. Activity Away From Associated Person's Member Firm

II. Arbitration

III. Distributions Of Securities

IV. Financial And Operational Practices

V. Impeding Regulatory Investigations

VI. Improper Use Of Funds/Forgery

VII. Qualification And Membership

VIII. Quality of Markets

IX. Reporting/Provision Of Information

X. Sales Practices

XI. Supervision

Schedule A To The NASD Sanction Guidelines

Index

NASD Sanction Guidelines

General Principles Applicable To All Sanction Determinations

1. **Disciplinary sanctions are remedial in nature and should be designed to deter future misconduct and to improve overall business standards in the securities industry.** The overall purposes of NASD's disciplinary process and NASD's responsibility in imposing sanctions are to remediate misconduct by preventing the recurrence of misconduct, improving overall standards in the industry, and protecting the investing public. Toward this end, Adjudicators should design sanctions that are significant enough to prevent and discourage future misconduct by a respondent, to deter others from engaging in similar misconduct, and to modify and improve business practices. Depending on the seriousness of the violations, Adjudicators should impose sanctions that are significant enough to ensure effective deterrence. When necessary to achieve this goal, Adjudicators should impose sanctions that exceed the range recommended in the applicable guideline.

When applying these principles and crafting appropriately remedial sanctions, Adjudicators also should consider firm size¹ with a view toward ensuring that the sanctions imposed are not punitive but are sufficiently remedial to achieve deterrence.² (Also see [General Principle No. 8](#) regarding ability to pay.)

2. **Disciplinary Sanctions Should Be More Severe For Recidivists.** An important objective of the disciplinary process is to deter and prevent future misconduct by imposing progressively escalating sanctions on recidivists beyond those outlined in these guidelines, up to and including barring registered persons and expelling firms. Adjudicators should always consider a respondent's disciplinary history in determining sanctions. Adjudicators should consider imposing more severe sanctions when a respondent's disciplinary history includes (a) past misconduct similar to that at issue; or (b) past misconduct that evidences disregard for regulatory requirements, investor protection, or commercial integrity. Even if a respondent has no history of

¹ Factors to consider in connection with assessing firm size are: the financial resources of the firm; the nature of the firm's business; the number of individuals associated with the firm; the level of trading activity at the firm; other entities that the firm controls, is controlled by, or is under common control with; and the firm's contractual relationships (such as introducing broker/clearing firm relationships). **This list is included for illustrative purposes and is not exhaustive. Other factors also may be considered in connection with assessing firm size.**

² Adjudicators may consider firm size in connection with the imposition of sanctions with respect to rule violations involving negligence. With respect to violations involving fraudulent, willful and/or reckless misconduct, Adjudicators should consider whether, given the totality of the circumstances involved, it is appropriate to consider firm size and may determine that, given the egregious nature of the fraudulent activity, firm size will not be considered in connection with sanctions.

relevant misconduct, however, the misconduct at issue may be so serious as to justify sanctions beyond the range contemplated in the guidelines, i.e., an isolated act of egregious misconduct could justify sanctions significantly above or different from those recommended in the guidelines.

Certain regulatory incidents are not relevant to the determination of sanctions. Arbitration proceedings, whether pending, settled, or litigated to conclusion, are not “disciplinary” actions. Similarly, pending investigations or the existence of ongoing regulatory proceedings prior to a final decision are not relevant.

In certain cases, particularly those involving quality-of-markets issues, these guidelines recommend increasingly severe monetary sanctions for second and subsequent disciplinary actions. This escalation is consistent with the concept that repeated acts of misconduct call for increasingly severe sanctions.

3. **Adjudicators should tailor sanctions to respond to misconduct at issue.** Sanctions in disciplinary proceedings are intended to be remedial and to prevent the recurrence of misconduct. Adjudicators therefore should impose sanctions tailored to address the misconduct involved in each particular case. Section 15A of the Securities Exchange Act of 1934 and NASD Procedural Rule 8310 provide that NASD may enforce compliance with its rules by: limitation or modification of a respondent's business activities, functions, and operations; fine; censure; suspension (of an individual from functioning in any or all capacities, or of a firm from engaging in any or all activities or functions, for a defined period or contingent on the performance of a particular act); bar (permanent expulsion of an individual from associating with a firm in any or all capacities); expulsion (of a firm from NASD membership and, consequently, from the securities industry); or any other fitting sanction.

To address the misconduct effectively in any given case, Adjudicators may design sanctions other than those specified in these guidelines. For example, to achieve deterrence and remediate misconduct, Adjudicators may impose sanctions that: (a) require a respondent firm to retain a qualified independent consultant to design and/or implement procedures for improved future compliance with regulatory requirements; (b) suspend or bar a respondent firm from engaging in a particular line of business; (c) require an individual or member firm respondent, prior to conducting future business, to disclose certain information to new and/or existing clients, including disclosure of disciplinary history; (d) require a respondent firm to implement heightened supervision of certain individuals or departments in the firm; (e) require an individual or member firm respondent to obtain an NASD staff letter stating that a proposed communication with the public is consistent with NASD standards prior to disseminating that communication to the public; (f) limit the number of securities in which a respondent firm may make a market; (g) limit the activities of a respondent firm or (h) require a respondent firm to institute tape recording procedures. *This list is illustrative, not exhaustive, and is included to provide examples of the types of sanctions that Adjudicators may design to address specific misconduct and to achieve deterrence. Adjudicators may craft other sanctions specifically designed to prevent the recurrence of misconduct.*

The recommended ranges in these guidelines are not absolute. The guidelines suggest, but do not mandate, the range and types of sanctions to be applied. Depending on the facts and circumstances of a case, Adjudicators may determine that no remedial purpose is served by imposing a sanction within the range recommended in the applicable guideline, i.e., that a sanction below the recommended range, or no sanction at all, is appropriate. Conversely, Adjudicators may determine that egregious misconduct requires the imposition of sanctions above or otherwise outside of a recommended range. For instance, in an egregious case, Adjudicators may consider barring an individual respondent and/or expelling a respondent member firm, regardless of whether the individual guidelines applicable to the case recommend a bar and/or expulsion or other less severe sanctions. Adjudicators must always exercise judgment and discretion and consider appropriate aggravating and mitigating factors in determining remedial sanctions in each case. In addition, whether the sanctions are within or outside of the recommended range, Adjudicators must identify the basis for the sanctions imposed.

4. **Aggregation or "batching" of violations may be appropriate for purposes of determining sanctions in disciplinary proceedings.** The range of monetary sanctions in each case may be applied in the aggregate for similar types of violations rather than per individual violation. For example, it may be appropriate to aggregate similar violations if: (a) the violative conduct was unintentional or negligent, i.e., did not involve manipulative, fraudulent, or deceptive intent; (b) the conduct did not result in injury to public investors or, in cases involving injury to the public, if restitution was made; or (c) the violations resulted from a single systemic problem or cause that has been corrected.

Depending on the facts and circumstances of a case, however, multiple violations may be treated individually such that a sanction is imposed for each violation. In addition, numerous, similar violations may warrant higher sanctions, since the existence of multiple violations may be treated as an aggravating factor.

5. **Where appropriate to remediate misconduct, Adjudicators should order restitution and/or rescission.** Restitution is a traditional remedy used to restore the status quo ante where a victim otherwise would unjustly suffer loss. Adjudicators may determine that restitution is an appropriate sanction where necessary to remediate misconduct. Adjudicators may order restitution when an identifiable person, member firm, or other party has suffered a quantifiable loss as a result of a respondent's misconduct, particularly where a respondent has benefited from the misconduct.³

Adjudicators should calculate orders of restitution based on the actual amount of the loss sustained by a person, member firm, or other party, as demonstrated by the evidence. Orders of restitution may exceed the amount of the

³ Other avenues, such as arbitration, are available to injured customers as a means to redress grievances.

respondent's ill-gotten gain. Restitution orders must include a description of the Adjudicator's method of calculation.

When a member firm has compensated a customer or other party for losses caused by an individual respondent's misconduct, Adjudicators may order that the individual respondent pay restitution to the firm.

Where appropriate, Adjudicators may order that a respondent offer rescission to an injured party.

6. **Where appropriate to remediate misconduct, Adjudicators should consider a respondent's ill-gotten gain when determining the amount of a fine.** In cases in which the record demonstrates that the respondent obtained a financial benefit from his or her misconduct, where appropriate to remediate misconduct, Adjudicators may require the disgorgement of such ill-gotten gain by fining away the amount of some or all of the financial benefit derived, directly or indirectly. "Financial benefit" includes any commissions, concessions, revenues, profits, gains, compensation, income, fees, other remuneration, or other benefits received by the respondent, directly or indirectly, as a result of the misconduct.⁴
7. **Where appropriate, Adjudicators should require a respondent to requalify in any or all capacities.** The remedial purpose of disciplinary sanctions may be served by requiring an individual respondent to requalify by examination as a condition of continued employment in the securities industry. Such a sanction may be imposed when Adjudicators find that a respondent's actions have demonstrated a lack of knowledge or familiarity with the rules and laws governing the securities industry.
8. **When raised by a respondent, Adjudicators are required to consider ability to pay in connection with the imposition, reduction, or waiver of a fine or restitution.** Adjudicators are required to consider a respondent's bona fide inability to pay when imposing a fine or ordering restitution. The burden is on the respondent to raise the issue of inability to pay and to provide evidence thereof.⁵ If a respondent does not raise the issue of inability to pay

⁴ While restitution is an appropriate method of depriving a respondent of his or her ill-gotten gain, where appropriate to remediate misconduct, the amount of some or all of the respondent's ill-gotten gain also may be used to determine the amount of a disciplinary fine. Certain guidelines specifically recommend that Adjudicators consider adding the amount of a respondent's financial benefit to the amount of the fine. These guidelines are singled out because they involve violations in which financial benefit occurs most frequently. These specific references should not be read to imply that it is less important or desirable to fine away ill-gotten gain in other instances. The concept of fining away ill-gotten gain is important and, if appropriate to remediate misconduct, may be considered in all cases whether or not the concept is specifically referenced in the applicable guideline. general principles applicable to all sanction determinations

⁵ See *In re Toney L. Reed*, Exchange Act Rel. No. 37572 (August 14, 1996), wherein the Securities and Exchange Commission directed NASD to consider financial ability to pay when ordering restitution. In these guidelines, the NAC has explained its understanding of the Commission's directives to NASD based on the *Reed* decision and other Commission decisions.

during the initial consideration of a matter before "trial-level" Adjudicators, Adjudicators considering the matter on appeal generally will presume the issue of inability to pay to have been waived (unless the inability to pay is alleged to have resulted from a subsequent change in circumstances). Adjudicators should require respondents who raise the issue of inability to pay to document their financial status through the use of standard documents that can be provided by NASD staff. Proof of inability to pay need not result in a reduction or waiver of a fine, restitution, or disgorgement order, but could instead result in the imposition of an installment payment plan or another alternate payment option. In cases in which Adjudicators modify a monetary sanction based on a bona fide inability to pay, the written decision should so indicate. Although Adjudicators must consider a respondent's bona fide inability to pay when the issue is raised by a respondent, monetary sanctions imposed on member firms need not be related to or limited by the firm's required minimum net capital.

Activity Away From Associated Person's Member Firm

Selling Away (Private Securities Transactions) NASD Conduct Rules 2110 And 3040

Principal Considerations in Determining Sanctions	Monetary Sanction	Suspension, Bar or Other Sanction
<p>See Principal Considerations in Introductory Section</p> <ol style="list-style-type: none"> 1. The dollar volume of sales. 2. The number of customers. 3. The length of time over which the selling away activity occurred. 4. Whether the product sold away has been found to involve a violation of federal or state securities laws or federal, state or SRO rules. 5. Whether the respondent had a proprietary or beneficial interest in, or was otherwise affiliated with, the selling enterprise or issuer and, if so, whether respondent disclosed this information to his or her customers. 6. Whether respondent attempted to create the impression that his or her employer (member firm) sanctioned the activity, for example, by using the employer's premises, facilities, name, and/or goodwill for the selling away activity or by selling a product similar to the products that the employer (member firm) sells. 	<p><i>Associated Person</i></p> <p>Fine of \$5,000 to \$50,000.¹</p>	<p><i>Associated Person</i></p> <p>The first step in determining sanctions is to assess the extent of the selling away, including the dollar amount of sales, the number of customers, and the length of time over which the selling away occurred. Adjudicators should consider the following range of sanctions based on the dollar amount of sales:</p> <ul style="list-style-type: none"> • Up to \$100,000 in sales: 10 business days to 3 months • \$100,000 to \$500,000: 3 to 6 months • \$500,000 to \$1,000,000: 6 to 12 months • Over \$1,000,000: 12 months to a bar <p>Following this assessment, Adjudicators should consider other factors as described in the Principal Considerations for this Guideline and the General Principles applicable to all Guidelines. The presence of one or more mitigating or aggravating factors may either raise or lower the above-described sanctions.</p>

¹ As provided for in [General Principle No. 6](#), Adjudicators should increase the recommended fine amount by adding the amount of a respondent's financial benefit.

² If the allegations involve a member's failure to supervise the selling away activity, then Adjudicators should also consider the Supervision-Failure To Supervise guideline.

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| <p>7. Whether the respondent's selling away activity resulted, either directly or indirectly, in injury to the investing public and, if so, the nature and extent of the injury.</p> | <p>Member Firm</p> <p>Where member firm receives written notice of a private securities transaction, but fails to provide</p> | |
| <p>8. Whether respondent sold away to customers of his or her employer (member firm).</p> | <p>written notice of approval, disapproval, or acknowledgment, fine of \$2,500 to \$10,000.²</p> | <p>Member Firm</p> <p>Where member firm receives written notice of a private securities transaction, but fails to provide written notice of approval, disapproval, or acknowledgment, consider suspending responsible supervisory personnel in any or all capacities for up to two years.</p> |
| <p>9. Whether respondent provided his or her employer firm with verbal notice of the details of the proposed transaction and, if so, the firm's verbal or written response, if any.</p> | | |
| <p>10. Whether respondent sold away after being instructed by his or her firm not to sell the type of the product involved or to discontinue selling the specific product involved in the case.</p> | | |
| <p>11. Whether respondent participated in the sale by referring customers or selling the product directly to customers.</p> | | |
| <p>12. Whether respondent recruited other registered individuals to sell the product.</p> | | |
| <p>13. Whether respondent misled his or her employer (member firm) about the existence of the selling away activity or otherwise concealed the selling away activity from the firm.</p> | | |

***Supervision—Failure To Supervise
NASD Conduct Rules 2110 And 3010¹***

Principal Considerations In Determining Sanctions	Monetary Sanction¹	Suspension, Bar, Or Other Sanctions
<p>See Principal Considerations In Introductory Section</p> <ol style="list-style-type: none"> Whether respondent ignored "red flag" warnings that should have resulted in additional supervisory scrutiny. Consider whether individuals responsible for underlying misconduct attempted to conceal misconduct from respondent. Nature, extent, size, and character of the underlying misconduct. Quality and degree of supervisor's implementation of the firm's supervisory procedures and controls. 	<p>Fine of \$5,000 to \$50,000.²</p> <p>Consider independent (rather than joint and several) monetary sanctions for firm and responsible individual(s).</p>	<p>Consider suspending responsible individual in all supervisory capacities for up to 30 business days. Consider limiting activities of appropriate branch office or department for up to 30 business days.</p> <p>In egregious cases, consider limiting activities of the branch office or department for a longer period or suspending the firm with respect to any or all activities or functions for up to 30 business days. Also consider suspending the responsible individual in any or all capacities for up to two years or barring the responsible individual. In a case against a member firm involving systemic supervision failures, consider a longer suspension of the firm with respect to any or all activities or functions (of up to two years) or expulsion of the firm.</p>

¹ This guideline also is appropriate for violations of MSRB Rule G-27.

² As set forth in [General Principle No. 6](#), Adjudicators may increase the recommended fine amount by adding the amount of a respondent's financial benefit.

Appendix 6 – SEC Enforcement Action Press Release

SEC Sanctions Chicago Stock Exchange and Requires Improvement of Surveillance and Enforcement Programs

FOR IMMEDIATE RELEASE
2003-126

Washington, D.C., September 30, 2003 — The Securities and Exchange Commission today instituted and simultaneously settled [an administrative enforcement](#) action against the Chicago Stock Exchange, finding that the Exchange failed to enforce certain of its trading rules. The Exchange consented to the entry of an order imposing a censure and requiring the Exchange to cease and desist from further violations of the federal securities laws and to comply with significant undertakings designed to enhance the Exchange's oversight of order handling by its members.

Stephen M. Cutler, Director of the Commission's Division of Enforcement, stated, "This case demonstrates that the Commission is and will continue to be vigilant and aggressive in ensuring that self-regulatory organizations fulfill their regulatory obligations."

Mary E. Keefe, Regional Director of the Commission's Midwest Regional Office, stated, "The Chicago Stock Exchange significantly expanded its trading volume without a commensurate expansion of its surveillance and disciplinary capabilities. As this case demonstrates, self-regulatory organizations must spend the necessary resources to improve and increase their surveillance and disciplinary capabilities to match any increase in activities conducted through their facilities."

The Commission's order includes findings that the Exchange neither admits nor denies. Specifically, the Commission found that the Exchange's surveillance program failed adequately to detect violations by its members of the firm quote rule, trading ahead prohibitions and the limit order display rule from 1998 through 2001. For instance, until early 2001, the Exchange's surveillance for intermarket firm quote rule violations was ineffective because it relied solely on telephone complaints alleging such violations. In another instance, from approximately June 1998 through August 2001, the Exchange failed to conduct any surveillance for intra-day trading ahead violations. In addition, the Commission found that even when the Exchange detected such violations, it often failed to take appropriate disciplinary actions against the individuals and/or firms that committed the violations. For instance, one Exchange co-specialist violated the firm quote rule up to 76 times in a 12-month period, yet the Exchange took no disciplinary action against this individual. This same individual traded ahead of customer orders on 37 occasions during the same period with no disciplinary consequences. These deficiencies were first detected by an inspection by the staff of the Commission's Office of Compliance Inspections and Examinations. The Commission found that the Exchange violated Section 19(g) of the Securities Exchange Act of 1934, which requires exchanges to enforce compliance by its members with the provisions and rules of the Exchange Act and with the exchanges' own rules.

Among the undertakings required by the settlement are: (i) the creation by the Exchange of a Regulatory Oversight Committee comprised almost exclusively of individuals with no material business relationship with the Exchange, which Committee will regularly advise the Exchange's Board of Governors about regulatory,

compliance and enforcement matters and assist the Board in monitoring the design, implementation and effectiveness of the Exchange's compliance programs; (ii) the engagement of an Independent Consultant to conduct a comprehensive review of the Exchange's trading floor surveillance and enforcement programs and provide recommendations to the Exchange; and (iii) the filing of various certifications by the Exchange's officials confirming its ongoing compliance with its statutory obligations. The Commission reiterates the importance of self regulatory organizations to fulfill their obligations in enforcing their rules. In particular, Section 6(b) of the Exchange Act requires a registered national securities exchange to be organized and have the capacity to be able to carry out the purposes of the Exchange Act and to comply and enforce compliance by its members with the Exchange Act, the rules and regulations thereunder, and the rules of the Exchange.

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Appendix 7 – NASD Enforcement Action Press Releases

FOR RELEASE: Monday, July 19, 2004
CONTACTS: [Nancy Condon](#) 202-728-8304
[Herb Perone](#) 202-728-8464



NASD FINES CITIGROUP, MERRILL LYNCH AND MORGAN STANLEY A TOTAL OF \$750,000 FOR FAILING TO COMPLY WITH DISCOVERY OBLIGATIONS IN ARBITRATIONS

Washington, D.C.—NASD announced today that it has censured and fined Citigroup Global Markets, Inc., formerly Salomon Smith Barney, Merrill Lynch, Pierce, Fenner & Smith Incorporated, and Morgan Stanley DW Inc. \$250,000 each for failing to comply with their discovery obligations in 20 arbitration cases during the period 2002 through 2004.

All three firms must also implement written procedures designed to ensure that future discovery violations that lead to sanctions are elevated to senior officers for review and appropriate corrective action.

"NASD is committed to making our arbitration forum faster, fairer, and less expensive than court procedures," said Robert Glauber, NASD Chairman and CEO. "We cannot deliver on this commitment if firms fail to produce all required documents in a timely manner to opposing parties. We will not tolerate any failure by NASD-regulated firms to cooperate fully in the arbitration process and we will bring enforcement actions as necessary to assure full compliance with our arbitration code."

These cases arise from arbitrations conducted before NASD Dispute Resolution, Inc. arbitration panels as well as arbitration panels sponsored by other regulatory forums. Citigroup was a party in six of the arbitrations. Merrill Lynch and Morgan Stanley were parties in seven arbitrations each.

In these arbitrations, arbitration panels cited the firms for failing to produce documents to the claimants, as required by rules involving document discovery. After finding in each of the arbitrations that the firms failed to fully comply with their discovery obligations to produce documents - even after arbitration panels had issued orders compelling that production - the panels sanctioned the firms in amounts as high as \$52,000.

As recently as last year, NASD formally reminded firms that "NASD rules require parties to NASD arbitrations to cooperate in the voluntary exchange of documents and information, and to respond to discovery requests from other parties" in a timely manner. NASD's [Notice to Members 03-70](#) pointed out that it had become clear that "despite the guidance provided in the Code and the Discovery Guide, NASD continues to receive complaints regarding possible abuses of the discovery process."

The Notice further stated that "some parties believe that noncompliance with their duty to cooperate in the discovery process - to voluntarily turn over documents listed on applicable Document Production Lists, or requested by other parties under Rule 10321 - is a routine and acceptable part of arbitration strategy."

In the cases announced today, NASD found that by failing to comply with their discovery obligations, each of the firms violated NASD's rule requiring that securities firms adhere to just and equitable principles of trade. NASD also found that in arbitrations conducted before NASD Dispute Resolution, each of the firms violated NASD's Code of Arbitration Procedure, which provides that a failure to produce any document pursuant to the provisions of the Code is deemed a violation of the just and equitable principles of trade.

As part of today's settlements, each firm has agreed to establish a written procedure requiring

review, at the management level of the firm, of any instance where an arbitration panel has sanctioned the firm for discovery violations and of instances where the firm is required to produce documents in response to a motion to compel filed in an arbitration. Each firm also agreed to notify all counsel handling arbitration proceedings on its behalf of the firm's policy to comply with discovery requirements in arbitration proceedings.

Citigroup, Merrill Lynch and Morgan Stanley agreed to the sanctions while neither admitting nor denying the allegations.

Investors can obtain more information about, and the disciplinary record of, any NASD-registered broker or brokerage firm by using NASD's BrokerCheck. NASD makes BrokerCheck available at no charge to the public. In 2003, members of the public used this service to conduct more than 2.8 million searches for existing brokers or firms and requested almost 180,000 reports in cases where disclosable information existed on a broker or firm. Investors can link directly to BrokerCheck at www.nasdbrokercheck.com. Investors can also access this service by calling 1-800-289-9999.

NASD is the leading private-sector provider of financial regulatory services, dedicated to bringing integrity to the markets and confidence to investors through effective and efficient regulation and complementary compliance and technology-based services. NASD touches virtually every aspect of the securities business — from registering and educating all industry participants, to examining securities firms, enforcing both NASD rules and the federal securities laws, and administering the largest dispute resolution forum for investors and registered firms. For more information, please visit our Web Site at www.nasd.com.

FOR RELEASE: Thursday, July 8, 2004
CONTACTS: [Nancy Condon](#) 202-728-8304
[Herb Perone](#) 202-728-8464



NASD BARS SCOTT W. RYAN, EXPELS RYAN & COMPANY FOR FAILURE TO COOPERATE IN SHORT SALE PROBE

NASD Investigation into Short Selling Activity for Hedge Funds Continues

Washington, D.C.—An NASD Hearing Panel has barred Scott W. Ryan of Bryn Mawr, PA, and has expelled Ryan & Company, LP (RYCO) of West Conshohocken, PA, for failure to cooperate in an ongoing investigation into whether Ryan and the firm engaged in a widespread scheme of impermissible short selling activity on behalf of three hedge fund clients.

As part of the investigation, NASD requested that Ryan and RYCO produce certain documents and information pertaining to short-selling and options transactions under review. NASD also requested copies of Ryan's and RYCO's tax returns and RYCO's certified financial statements for fiscal years 1999 through 2003. Ryan and RYCO refused to provide all but a small portion of the requested documents and information, claiming NASD's requests were burdensome and irrelevant.

The Hearing Panel found that Ryan's and RYCO's objections were without merit and were not raised "in a good faith attempt to resolve their concerns in a timely and complete manner."

Instead, the Hearing Panel said, Ryan and RYCO "made no effort to comply with portions of the document requests... assumed a hostile stand, challenging the (NASD) staff's motives... (and) obdurately stalled the staff's efforts to complete the investigation by repeatedly raising meritless objections."

The Hearing Panel's decision will become final on Aug. 4, 2004, unless it is appealed to NASD's National Adjudicatory Council (NAC), or called for review by the NAC. If the decision is appealed or called for review, the sanctions may be increased, decreased, modified or reversed.

A Hearing Panel consists of an NASD Hearing Officer, along with two members of the securities industry. The NAC is a 14-person committee composed of seven industry and seven non-industry members that decides appeals from disciplinary, membership and exemption decisions; rules on statutory disqualification applications; and advises on other policy matters.

NASD's investigation into the suspected short selling scheme by Ryan and RYCO is continuing.

Investors can obtain more information and the disciplinary record of any NASD-registered broker or brokerage firm by calling NASD's BrokerCheck. NASD makes available BrokerCheck at no charge to the public. In 2003, members of the public used this service to conduct more than 2.9 million searches for existing brokers or firms and requested almost 180,000 reports in cases where disclosable information existed on a broker or firm. Investors can link directly to the program by going online to www.nasdbrokercheck.com. Investors can also continue to access this service by calling 1-800-289-9999.

NASD is the leading private-sector provider of financial regulatory services, dedicated to bringing integrity to the markets and confidence to investors through effective and efficient regulation and complementary compliance and technology-based services. NASD touches virtually every aspect of the securities business — from registering and educating all industry participants, to examining securities firms, enforcing both NASD rules and the federal securities laws, and administering the largest dispute resolution forum for investors and registered firms. For more information, please visit our Web Site at www.nasd.com.

Appendix 8 – Knowledge Engineer Job Description

Essential Job Function

PURPOSE: Acts as project leader to direct assigned staff in all phases of systems development including requirements, systems design, implementation, acceptance testing, and installation.

ESSENTIAL JOB FUNCTIONS: Plans, conducts and directs processing procedures of major importance and difficulty with applications of advanced operating program knowledge. Considerable latitude for actions and decisions. Responsible for encoding, testing, debugging and documenting the most complex programs and procedures. Prepares detailed program specifications and diagrams and develops coding logic flowcharts for the most complex projects. Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time and form of desired results. Responsible for reviewing and training of less experienced programmer analysts and analyze results.

Requirements

Four-year college degree in computer science or equivalent with 5-7 years of related experience. Experience can be substituted for an advanced degree. Has full technical knowledge of all phases of systems analysis and programming.

Appendix 9 -- List of Individuals with Whom NASD Team Met

Jordan Securities Commission

His Excellency Dr. Bassam Saket, Executive Chairman
Dr. Tayseer Abdel Jaber, Deputy Chairman
Mr. Mohamed Tash, Commissioner
Mr. Bassam Asfour, Commissioner
Dr. Abderrzaq Bani Hani, Commissioner
Ms. Laila Ammari, Director, Capital Market Monitoring Department
Mr. Hussein Abu-Ayyash, Information Technology Manager
Ms. Amal Abu-Zayed, Director, Licensing Department
Mr. Abdelrauf Rabab'a, Director, Issuance & Disclosure Department
Ms. Raeda Naber, Capital Market Monitoring Department
Mr. Walid M. Alabedalat, Capital Market Monitoring Department

Amman Stock Exchange

Mr. Jalil Tarif, The Executive Manager
Mr. Nader Azar, Deputy CEO
Mr. Mithqal Obaidat, Head, Legal Department
Mr. Mohammed Khatib, Information Technology Manager
Mr. Abdel-Razaq M. Al-Farah, Surveillance and Inspection Department
Mr. Bassam Abu Abbas, Trading Department

Securities Depository Center

Mr. Samir Jaradat, Chief Executive Officer

U.S. Agency for International Development

Mr. Jim N. Barnhart, Director, Economic Opportunities Office
Mr. Sean Jones, Deputy Director, Economic Opportunities Office
Mr. Jamal Al-Jabiri, Cognizant Technical Officer
Mr. Don Richardson, USAID Senior Private Sector Consultant

AMIR Program

Mr. Stephen P. Wade, Program Director
Mr. Khush Choksy, Financial Markets Development Team Leader
Ms. Nicole Rhind, Financial Markets Development Team Consultant
Mr. Ramzi Al-Sheshani, Information Technology Specialist

Other

Mr. Eugene Callan, Financial Markets Development Consultant